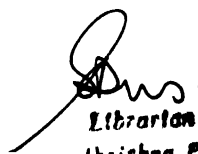


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JHELUM TOWN

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senting 28.9 per 1,000 of the population. The Vaccination Act has been extended to the towns of Jhelum and Pind Dādan Khān.

[W. S. Talbot, *District Gazetteer* (in press); *Settlement Report* (1902); and *General Code of Tribal Custom in the Jhelum District* (1901).]

Jhelum Tahsīl (Jehlām).—Eastern *tahsīl* of Jhelum District, Punjab, lying between $32^{\circ} 39'$ and $33^{\circ} 15'$ N. and $73^{\circ} 9'$ and $73^{\circ} 48'$ E., with an area of 888 square miles. It is bounded on the east and south-east by the Jhelum river, which divides it from Kashmīr and Gujrāt District. The population in 1901 was 170,978, compared with 177,046 in 1891. The head-quarters are at the town of JHELUM (population, 14,951). It also contains 433 villages. The land revenue and cesses in 1903-4 amounted to 2.7 lakhs. The *tahsīl* is traversed from south-west to north-east by two spurs of the Salt Range, the more easterly of which culminates in the peak of TILIA. Between this and the Jhelum river is an almost level alluvial plain of great fertility, while between the two spurs the country is seamed with ravines. The fort of ROHTĀS is of historical interest.

Jhelum Town (Jehlām).—Head-quarters of the District and *tahsīl* of Jhelum, Punjab, situated in $32^{\circ} 56'$ N. and $73^{\circ} 47'$ E., on the right bank of the Jhelum river and on the North-Western Railway; distant by rail 1,367 miles from Calcutta, 1,403 from Bombay, and 849 from Karāchi. Population (1901), 14,951. The present town is of modern origin, the old town, which may have been the Bucephala of Alexander, having been on the left or opposite bank of the river. Under Sikh rule the place was quite unimportant, being mainly occupied by a settlement of boatmen, and at the time of annexation contained about 500 houses. It was then chosen as the site of a cantonment, and as the head-quarters of the civil administration. For some years it was the seat of the Commissioner of the Division, but in 1859 his head-quarters were transferred to Rāwalpindi. Under British rule Jhelum has steadily advanced in prosperity; and it is the entrepôt for most of the trade of the District, though, since the completion of the Sind-Sāgar branch of the North-Western Railway, the salt trade no longer passes through it. It is an important timber dépôt, the timber from the Kashmīr forests which is floated down the river being collected here. A good deal of boat-building is carried on. The cantonment, which is 3 miles from the civil station, contains the church and post office. The normal strength of the garrison is one Native cavalry and four Native infantry regiments. The municipality was founded in 1867. During the ten years ending 1902-3 the receipts averaged Rs. 32,100, and the expenditure Rs. 31,900. Receipts and expenditure from cantonment funds in the same period averaged Rs. 5,900 and Rs. 6,100, respectively. The income of the municipality in 1903-4 was Rs. 34,200, chiefly from

octroi ; and the expenditure was Rs. 41,000. The town possesses two Anglo-vernacular schools, a municipal high school, and a middle school maintained by the American Presbyterian Mission. Besides the civil hospital, the mission also maintains a hospital.

Jhelum (*Jehlam*).—River in Kashmir and the Punjab, being the most westerly of the five rivers from which the Punjab derives its name. It was known to the Muhammadan historians as the Bihat, Wihat, or Bihatab, corruptions of its Sanskrit name *Vitastā* (which Alexander's historians graecized into *Hydaspes*, but Ptolemy more correctly as *Bidaspes*), while its modern Kashmirī name is *Veth*. It may be said to have its source in a noble spring of deep-blue water, which issues from the bottom of a high scarp of a mountain spur. The spring is known as Vernāg ; and at Khānabal, 15 miles north, its waters join the streams of Adpat, Bring, and Saṇdran, and form the starting-point of navigation. The river is navigable without a single lock from Khānabal to Bāramūla, 102 miles. In its course to the Wular Lake, which may be regarded as a delta of the river, the fall is 165 feet in the first 30 miles and 55 feet in the next 24 miles. From the Wular Lake to Bāramūla the fall is very slight.

The Jhelum river has many tributaries. On its right bank it receives the Liddar or Lambodri, which comes down from the everlasting snows overhanging the head of the Liddar valley, and from the mountain lake of Tarsar. Below Srinagar at Shādipur—the place of the marriage of the two rivers—the Sind river joins the Jhelum ; and beyond the Wular Lake the Pohru stream, which drains the Lolāb valley, merges in the great river. On the left bank the chief tributaries are the Vishav, the Rembiara, the Ramshī, the Dudgangā, the Suknāg, and the Ferozepura. The Dudgangā joins the Jhelum at the lower end of Srinagar city.

Below Bāramūla (5,000 feet) the placid Jhelum leaves the fertile banks of the valley, and rushes headlong down a deep gorge between lofty mountains of the Kazināg range on the north and an extension of the Pīr Panjāl on the south to Kohāla, 2,000 feet. At Muzaffarābād the Kishangangā river joins the Jhelum on its right bank, while a few miles lower down, and on the same side, the Kunhār river, which drains the Hazāra country, adds no inconsiderable volume of water. Between Khānabal and Bāramūla there are many bridges, but between Bāramūla and Domel, where the Kishangangā river joins the Jhelum, the bridges are scarce and primitive. Much of the internal commerce of Kashmir depends on the Jhelum. An account of the various descriptions of boats used is given in the article on SRĪNAGAR.

Below its junction with the Kishangangā the Jhelum forms the boundary between the Kashmir State and the British Districts of Hazāra and Rāwalpindi, flowing in a narrow rocky bed, shut in by mountains

on either side. Numerous rapids here render navigation impossible, though large quantities of timber are floated down from Kashmir. A handsome suspension bridge at Kohāla, in Rāwalpindi District, connects Kashmir with British territory. Below Dangalli, 40 miles east of Rāwalpindi, the Jhelum becomes navigable. Passing into Jhelum District, it skirts the outlying spurs of the Salt Range, receiving the waters of the Kahan, and finally debouches upon the plains a little above the town of Jhelum, about 250 miles from its source. Below the town, inundation of the lowlands begins to be possible, and sandy islands stud the wide bed of the stream. The Bunhā, in the rains a roaring torrent which sometimes spreads over a mile of country, joins the Jhelum at Dārāpur. After a south-westerly course of more than 100 miles, during which the river divides the District of Jhelum from Gujrāt and Shāhpur, it enters the latter District entirely, and trends thenceforth more directly southward. The width in this portion of its course averages 800 yards in flood, dwindling during the winter months to less than half that size. Sudden freshes occur after heavy rains, and cause frequent inundations over the lowlands, greatly increasing the productive power of the soil. The Jhelum next enters the District of Jhang, where it preserves the same general characteristics, but with a wider valley, bounded by the high uplands known as the Bār. It finally joins the Chenāb at Taimmu, in $31^{\circ} 11' N.$ and $72^{\circ} 12' E.$, 10 miles to the south of Maghiāna, after a total course of not less than 450 miles, of which about 200 lie within British territory. The current in the plains has an average rate of 4 miles per hour. The wedge of land between the Jhelum and the Chenāb is known as the Chaj Doāb; while the tract stretching westward to the Indus bears the name of the Sind Sāgar Doāb.

The principal towns upon the Jhelum are Kashmīr or Srīnagar, Jhelum, Pind Dādan Khān, Miāni, Bhera, and Khushāb. According to General Cunningham, the point where Alexander crossed the Hydaspes may be identified with Jalālpur in Jhelum District; while nearly opposite, on the Gujrāt bank, stands the modern battle-field of Chilianwāla. Other writers hold that the passage was effected near Jhelum town. A bridge of boats crosses the river at Khushāb. The permanent railway bridge of the North-Western Railway also crosses it at the town of Jhelum, and the Sind-Sāgar line at Haranpur. The LOWER JHELUM CANAL takes off at Mong Rasūl in Gujrāt District.

Jhelum Canal, Lower.—A perennial irrigation work in the Punjab now approaching completion. It takes off from the left bank of the Jhelum river, and will eventually supply perennial irrigation to the whole of the country lying between the Jhelum and the Chenāb, west of a line joining the town of Miāni on the Jhelum with Pindi

Bhattiān on the Chenāb. The head of the canal is near the village of Mong Rasūl in Gujrāt District. The river is dammed by a weir 4,100 feet long, and a regulator across the head of the canal takes the form of a bridge of eight spans of $24\frac{1}{2}$ feet each. The main line has a bed-width of 140 feet, and will have when running full a depth of 7.5 feet, and a discharge of 3,800 cubic feet per second, or twice that of the Thames at Teddington. The Shāhpur branch will take off at about the twenty-eighth mile of the main line. This branch has been designed to take up the irrigation now performed in Shāhpur District by the existing Imperial, Provincial, and privately-owned inundation canals. After a course of 39 miles, in which it gradually approaches the centre of the highlands of the Doāb, the canal bifurcates into two main branches, watering the northern and southern portions of the Doāb respectively. The total length of the main line and main branches is about 167 miles, and about 960 miles of distributing channels will be constructed. The canal will protect an area of 2,400 square miles, and is expected to irrigate annually about 1,200 square miles. Of the 2,400 square miles protected, about 850 are crown waste, which it is intended to turn into an immense horse-breeding colony for the supply of remounts to the Indian Army. For this purpose the greater portion has been leased out to colonists on the condition of their keeping an approved brood mare, and other areas have been reserved for public and private breeding establishments and horse runs. The work of colonization is under an officer of the Indian Civil Service, who has his head-quarters at Sargodha in Shāhpur District. The land has been divided into squares of nearly 28 acres each, and one brood mare has to be maintained for every $2\frac{1}{2}$ squares. A railway has been constructed from Malakwāl on the Sind-Sāgar line to Shorkot on the Lyallpur-Khānewal line, affording facilities for the immigration of colonists and the export of their produce.

Elaborate precautions have been taken to prevent waterlogging of the soil by over-irrigation. The depth at which spring-water is found below the surface of the ground has been carefully observed over the whole of the commanded area, and the country has been divided into three zones according to those depths. Where the spring-level is 40 feet or more below the surface, 50 per cent. of the gross area commanded may be irrigated; where the depth lies between 25 and 40 feet, 40 per cent. of the area will be irrigated; and where the water is nearer to the surface than 25 feet, only 25 per cent. will be allowed perennial irrigation, and powers have been reserved to reduce these supplies if they should be found to be in excess of requirements. On the Shāhpur branch 50 per cent. of the area will be irrigated.

The canal was opened on October 30, 1901; and irrigation is now well advanced, except on the Shāhpur branch, the construction of

which has only just been commenced. It is estimated that this canal will cost when finished 187.5 lakhs, and will give a return of 15.8 per cent. on the capital spent upon it, and that ten years after completion the net revenue will exceed the interest charges by 192 lakhs.

Jhelum Colony.—Colony on the Jhelum Canal, in the District and *tahsil* of Shāhpur, Punjab. The total area to be irrigated from the Jhelum Canal amounts to 2,392 square miles, lying partly in Jhang and partly in Shāhpur District. Of this, 750 square miles of waste land in the Bār or upland of the southern part of Shāhpur District belong to Government; and upon it colonists are being settled in villages, on the same terms as the colonists in the CHENĀB COLONY, but the majority of grants have been made on the condition that a suitable mare is maintained for breeding purposes. Up to the end of 1904 about 231 square miles had been allotted to grantees. A large area has also been allotted for Imperial horse and mule runs and for regimental stud farms. The head-quarters of the colony are at SARGODHA, the head-quarters of the new Sargodha *tahsil*, which is fast rising into an important town. It is connected by the new Jech Doāb branch of the North-Western Railway with Malakwāl on the Hind-Sāgar line, and with Shāhpur by a new metalled road. The railway is also being extended to Shorkot in Jhang District. Wells, roads, and markets are being built, and a complete system of feeder-roads is under construction.

Jhenida Subdivision.—North-western subdivision of Jessore District, Bengal, lying between $23^{\circ} 22'$ and $23^{\circ} 47'$ N. and $88^{\circ} 57'$ and $89^{\circ} 23'$ E., with an area of 475 square miles. The population in 1901 was 304,899, compared with 311,973 in 1891. It contains one town, KOTCHĀNDPUR (population, 9,065), and 864 villages. The head-quarters are at JHENIDA. The subdivision is a flat, alluvial plain, the surface of which has been raised by the inundations of the Ganges distributary system till it is now beyond the reach of ordinary floods, and no longer receives the deposits of silt which formerly enriched it. It contains the most unhealthy portions of the District. The population has consequently receded, and the density is now 642 persons to the square mile. The principal marts are at Jhenida and Kotchāndpur.

Jhenida Village.—Head-quarters of the subdivision of the same name in Jessore District, Bengal, situated in $23^{\circ} 33'$ N. and $89^{\circ} 11'$ E., on the Nabagangā river, 28 miles north of Jessore town. Population (1901), 798. There is a large bazar, with a trade in sugar, rice, and pepper. Communication was formerly carried on chiefly by means of the river, but this has now to a great extent silted up, and is navigable only below the town and for three months in the year. Jhenida is connected by road with Chuādānga station on the Eastern Bengal

State Railway. It contains the usual public offices; the sub-jail has accommodation for 11 prisoners.

Jher.—Petty State in MAHĪ KĀNTHA, Bombay.

Jherriā.—Coal-field in Mānbhūm District, Bengal. *See* MĀNBHŪM.

Jhingergācha.—Village in the head-quarters subdivision of Jessore District, Bengal, situated in 23° 6' N. and 89° 8' E., on the Kabadak river. Population (1901), 736. Jhingergācha is a station on the Eastern Bengal State Railway, and steamers ply between it and Kapilmuni in Khulnā District.

Jhinjhāna.—Town in the Kairāna *tahsil* of Muzaffarnagar District, United Provinces, situated in 29° 31' N. and 77° 13' E., on the left bank of the Kathā, 30 miles from Muzaffarnagar town. Population (1901), 5,094. The town is the home of a family of Shaikhs who have resided here from an early date. It contains a *dargāh* of a Muhammadan saint built in 1495 and several monuments of the Shaikhs, the chief being a mosque and tomb built in 1623, decorated with coloured tiles. Jhinjhāna is administered under Act XX of 1856, with an income of about Rs. 1,700. It was formerly very dirty; and although the streets have recently been paved, it is still unhealthy.

Jhinjhūvāda.—Petty State in KĀTHIĀWĀR, Bombay.

Jhiri.—River between Manipur State and Cāchār District, Eastern Bengal and Assam. *See* JIRI.

Jhūnjhunu.—Head-quarters of the *tahsil* of the same name and of the Shekhāwāti *nizāmat* in the State of Jaipur, Rājputāna, situated in 28° 8' N. and 75° 23' E., about 90 miles north-by-north-west of Jaipur city. Population (1901), 12,279. The place was the head-quarters of the Shekhāwāti Brigade, a force maintained by the Darbār from 1836 to 1842 to preserve the peace, and now represented by the 13th Rājputs (the Shekhāwāti Regiment). At the eastern end of the town is a suburb still called Forsterganj after the officer who raised and commanded the brigade. To the west is a hill 1,684 feet above sea-level and visible for miles round; it is said to have been seen with the naked eye from a distance of 95 miles. The town contains the mausoleum of Kamar-ud-dīn Shāh, the patron saint of the Kaimkhānis; a Jain temple said to be 1,000 years old; a combined post and telegraph office; 10 schools; and a hospital with accommodation for 4 in-patients.

Jhūsī.—Town in the Phūlpur *tahsil* of Allahābād District, United Provinces, situated in 25° 26' N. and 81° 54' E., on the Ganges, opposite its junction with the Jumna. Population (1901), 3,342. Jhūsī has been identified with the Pratisthān or Kesī of the Purānic histories, which was the residence of Purūravas, first king of the Lunar dynasty and son of the moon. It was at one time called Harbongpur after the Rājā Harbong, of whose vagaries and misrule many fables are told.

In the time of Akbar the town was known as Hādiābās. It has recently been suggested that Jhūsī was the Kia-shi-pu-lo visited by Hiuen Tsiang. Two great mounds, once the site of forts, are the only visible remains; but gold coins of the Gupta kings, and a copperplate of Trilochana Pāla, dated in A.D. 1027, have been discovered here¹. Jhūsī is administered under Act XX of 1856, with an income of about Rs. 500. There is a small school with 30 pupils.

Jiāganj.—Village in the Lālbaḡ subdivision of Murshidābād District, Bengal, situated in 24° 15' N. and 88° 16' E., on the left bank of the Bhāgīrathi, 3 miles north of Murshidābād city, and opposite Azīmganj station on the East Indian Railway. Population (1901), 8,734. Though it has somewhat declined in importance, Jiāganj is still a large dēpôt where rice, jute, silk, sugar, and a small quantity of cotton are collected for export. A jute-press is at work here. Jiāganj, which is included within the Azīmganj municipality, is connected with Azīmganj by a ferry, and during the rainy season a steamer plies between it and Dhuliān. It contains some large houses, the property of Jain merchants, many of whom dwell here, though the main colony lives in Azīmganj.

Jignī.—A petty *sanad* State in Central India, under the Bundelkhand Agency, with an area of about 22 square miles. Population (1901), 3,838. It is surrounded by portions of the Hamīrpur and Jhānsi Districts of the United Provinces. The holders of the *jāgīr* are Bundelā Rājputs, the founder being Rao Padam Singh, a son of the famous Chhatarsāl, who acquired in 1730 the *parganas* of Rāsin and Badaus (now in Hamīrpur District). The *jāgīr*, originally a large one, was much reduced during the Marāthā invasion, Lachhman Singh managing to obtain only a grant of the two *parganas* of Rāth and Panwārī from the invaders. When the British supremacy was established, Prithwī Singh, Lachhman's son, was in possession of fourteen villages, but in consequence of his contumacy they were attached. In 1810 the six villages which constitute the present holding were restored to him under a *sanad*. The present *jāgīrdār* is Rao Bhānu Pratāp Singh, a cousin of the Mahārājā of Charkhārī, who succeeded by adoption in 1892. Number of villages, 6; cultivated area, 9 square miles; revenue, Rs. 13,000. Jignī, the chief town, is situated in 25° 45' N. and 79° 25' E., on the right bank of the Dhasān river, at the confluence of that stream and the Betwā. Population (1901), 1,770.

Jind State.—One of the Phūlkiān States, Punjab. The State has a total area of 1,332² square miles, and comprises three distinct tracts,

¹ *Indian Antiquary*, vol. xviii, p. 34.

² These figures do not agree with the area given in Table III of the article on the PUNJAB, and in the population table on p. 170 of this article, which is the area as returned in 1901, the year of the latest Census. They are taken from later returns.

corresponding to its three *tahsils* of Sangrūr, Jīnd, and Dādri. The first, in which lies Sangrūr, the present capital of the State, is interspersed among the territories of the other Phūlkiān States, Patiāla and Nābha; the Jīnd *tahsil*, lying to the south-east of Sangrūr, is almost entirely surrounded by the British Districts of Karnāl and Rohtak; while on the south of it, and separated from it by Rohtak District, lies the *tahsil* of Dādri. Sangrūr lies in the great natural tract known as the Jangal; Jīnd is in the Bāngar and includes a part of KURUKSHETRA, the sacred land of the Hindus; and Dādri lies partly in the Bāgar, the desert on the Rājputāna border, and partly in Hariāna.

Physical aspects. No great river traverses the State; but the Choya torrent passes through Sangrūr, and a still smaller stream, the Jhambūwāli, and the Ghaggar river also enter that *tahsil*. In Dādri a few villages are fertilized by the Dohān, a seasonal torrent which rises in Jaipur State and loses itself in Rohtak District. With the exception of some low hills, outliers of the Arāvalli system, in the Dādri *tahsil*, the State consists of level plains whose monotony is broken only in Sangrūr by shifting sandhills.

The flora corresponds (as regards the older parts of the State) with that of Karnāl and Rohtak; in the Dādri *tahsil* it is identical with the adjoining tracts of North-Eastern Rājputāna. The fauna is much the same as in the Patiāla plains.

Owing to the scattered character of the State, the climate is not uniform. The Jīnd *tahsil* is moist and unhealthy; Dādri is dry, sandy, and healthy; and Sangrūr possesses the same characteristics in a less degree. The rainfall is heaviest in Sangrūr, where it averages 17 inches a year, while Jīnd receives about 12 inches. Dādri has the lowest rainfall, 10 inches, and is the tract most subject to drought, the two other *tahsils* being now protected against famine by canals.

The history of Jīnd as a separate State dates from 1763, in which year the confederate Sikhs captured Sirhind town from the governor to whom Ahmad Shāh Durrāni had entrusted it, and partitioned the old Mughal province. The Rājā of

History. Jīnd is descended from Sukh Chain, a grandson of Phūl, the ancestor of all the Phūlkiān families, who had previously been a mere rural notable. On Sukh Chain's death in 1751 Bālānwāli, which he had founded, fell to Alam Singh his eldest son, Badrukhān to his second son Gajpat Singh, and Dyālpura to Bulāki. On Alam Singh's death in 1754 Bālānwāli also passed to Gajpat Singh, who was the most adventurous of the three brothers, and in 1755 conquered the imperial *parganas* of Jīnd and Safidon and overran Pānipat and Karnāl, but was not strong enough to hold them. In 1766 Gajpat Singh made Jīnd town his capital. Nevertheless he remained a vassal of the Delhi empire and continued to pay tribute, obtaining in return in 1772 an

imperial *farmān* which gave him the title of Rājā. In 1774, in consequence of a quarrel with the Rājā of Nābha, he attacked Amloh, Bhāḍson, and Sangrūr, which were in the Nābha territories ; and though he was compelled by the Rājā of Patiāla to relinquish the first two places, he succeeded in retaining the last, which has ever since remained part of the Jind State. In the next year, the Delhi government made an attempt to recover Jind ; but the Phūlkiān chiefs combined to resist the attack, which was repulsed. Gajpat Singh built a fort at Jind in 1775, and soon after this joined the Rājā of Patiāla in an invasion of Rohtak ; but the Mughal power was strong enough to compel them to give up most of their conquests, though Jind retained Panjgurān. Again, in 1870, the allies marched on Meerut, but were defeated, and Gajpat Singh was taken prisoner by the Muhammadan general, his release being secured only by payment of a heavy ransom. He died in 1789, and was succeeded by two sons -- Bhāg Singh, who inherited the title of Rājā with the territories of Jind and Safidon ; and Bhūp Singh, who obtained Badrukhān.

Rājā Bhāg Singh shrewdly held aloof from the combination against the British ; and when Sindhiā's power in Northern India was ultimately broken, Lord Lake rewarded him by confirming his title in the Gohāna estates which had previously been farmed to him by the Marāthās. He afterwards accompanied Lord Lake as far as the Beās in his pursuit of Jaswant Rao Holkar, and was sent as an envoy to Mahārājā Ranjit Singh, who was the son of his sister Rāj Kaur, to dissuade him from assisting the fugitive prince. The mission was successful. Holkar was compelled to leave the Punjab, and Bhāg Singh received as his reward the *pargana* of Bawāna to the south-west of Pānīpat. The history of Ranjit Singh's interference in the Phūlkiān States has been given in the article on PATIĀLA. From Ranjit Singh, Rājā Bhāg Singh received territory now included in Ludhiāna District, comprising Jandālā, Raikot, Bassiān, and Jagraon. He died in 1819 after ruling thirty-six years, and was succeeded by his son Fateh Singh, who died in 1822. Troublous times followed, and Sangat Singh, who succeeded his father Fateh Singh, was obliged for a period to desert his capital. He died childless in 1834 : and the question of the succession was finally settled in 1837, when Sarūp Singh of Bāzīdpur, a second cousin of the deceased Rājā, was recognized as chief of all the territory that had been held by his great-grandfather, Gajpat Singh, through whom he derived his title. The territory to which he thus succeeded consisted of Jind proper and nine other *parganas*, containing 322 villages, with a revenue of Rs. 2,36,000, while the acquisitions of the chiefs subsequent to Gajpat Singh, comprising territory yielding Rs. 1,82,000, were resumed by the British Government.

Before the outbreak of the first Sikh War the Rājā of Jind was in

close alliance with Patiāla against Rājā Deoindar Singh of Nābha. His attitude to the British Government, however, was anything but friendly in 1845, until a timely fine recalled him to his allegiance. In the first Sikh War his conduct was exemplary, and he furnished both troops and supplies, receiving in reward a grant of land of the annual value of Rs. 3,000, while the fine of the previous year was remitted. Another grant, yielding Rs. 1,000, was shortly afterwards added, in consideration of the abolition of the State transit dues. In 1847 the Rājā received a *sanad* by which the British Government engaged never to demand from him or his successors tribute or revenue, or commutation in lieu of troops; the Rājā on his part promised to aid the British with all his resources in case of war, to maintain the military roads, and to suppress *sati*, slave-dealing, and infanticide in his territories. When the second Sikh War broke out, Rājā Sarūp Singh offered to lead his troops in person to join the army at Lahore. In the crisis of 1857 he rendered most valuable assistance. He occupied the cantonment of Karnāl with 800 men, and held the ferry over the Jumna at Bāghpat, 20 miles north of Delhi, thus enabling the Meerut force to join Sir H. Barnard's column. He was present at the battle of Alipur, but at the end of June was compelled to pay a flying visit to Jīnd, as the rebels of Hānsi, Rohtak, and Hissar had induced some of his villages to revolt. He returned to Delhi on September 9, and his contingent took a prominent part in the final assault on the city. He was further active throughout in sending supplies to the besieging force, and in keeping open the lines of communication and preserving order in the districts adjoining his State. After the fall of Delhi he sent 200 men with General van Cortlandt to Hānsi, and 110 more with Colonel R. Lawrence to Jhajjar, while 250 remained to garrison Rohtak. These splendid services received a fitting reward in the grant of the Dādri territory, covering nearly 600 square miles, forfeited for disloyalty by the Nawāb of Bahādurgarh. This territory now yields a revenue of over 2 lakhs. He also received 13 villages, assessed at Rs. 1,38,000, in the Kulārān *pargana*, close to Sangrūr, where the Rājā now has his capital, and a house at Delhi, valued at Rs. 6,000. His salute was raised to 11 guns; and, like the other Phūlkiān chiefs, he received a *sanad* granting him the right of adoption in case of the failure of natural heirs, and legalizing the appointment of a successor by the two other Phūlkiān chiefs, in concert with the Political Agent, in the event of the Rājā dying without male issue and without having adopted a successor.

Rājā Sarūp Singh died in 1864. He was succeeded by his son, Raghubir Singh, who was in every way worthy of his father. Immediately after his installation he was called upon to put down a serious insurrection in the newly-acquired territory of Dādri. The people

objected to the new revenue assessment, which had been based upon the British system, though the rates were much heavier than those prevailing in the neighbouring British Districts. Fifty villages broke out in open revolt, but Rājā Raghubīr Singh lost no time in hurrying to the scene of the disturbances with about 2,000 men of all arms. The village of Charki, where the ringleaders of the rebellion had entrenched themselves, was carried by assault, and within six weeks of the outbreak the country was again perfectly quiet. The Rājā rendered prompt assistance to the British Government on the occasion of the Kūka outbreak in 1872; and when the second Afghān War broke out in 1878, the British Government accepted his offer of a contingent, which rendered useful service on the line of communications. As a reward, the honorary title of Rājā-i-Rājgān was conferred on the Rājā of Jīnd in perpetuity. An offer of assistance in the Egyptian campaign of 1882 was declined, with a suitable recognition of the Rājā's loyalty. Rājā Raghubīr Singh was indefatigable in his efforts to promote the prosperity, material and otherwise, of his people. He rebuilt the town of Sangrūr, modelling it largely on Jaipur, and made many improvements at Jīnd, Dādri, and Safidon. It is largely owing to his efforts that Jīnd is to-day the first of the Phūlkian States as regards artistic manufactures. He died in 1887, leaving a grandson, Ranbīr Singh, to succeed him. Rājā Ranbīr Singh was only eight years old at his accession, and a Council of Regency was appointed to carry on the administration until he attained majority. Full powers were given him in November, 1899, in a *darbār* held at Sangrūr.

The southern portion of KURUKSHETRA lies within the boundaries of the State, but the antiquities of the tract have never been properly explored. There are several old buildings and tanks, especially in and around SAFIDON, for which an antiquity is claimed coeval with the events of the Mahābhārata.

The State contains 7 towns and 439 villages, and its population at the last three enumerations was: (1881) 249,862, (1891) 284,560, and (1901) 282,003. The decrease of 1 per cent. during the last decade was due to famine, which caused considerable emigration from Dādri. It is divided into two *nizāmat*s or administrative districts: SANGRŪR, which comprises the *tahsil* of that name; and JĪND, divided into the two *tahsils* of Jīnd and Dādri. Their head-quarters are at Sangrūr and Jīnd respectively. The principal towns are SANGRŪR, the modern capital, JĪND, the former capital, SAFIDON, DĀDRI, and KALIĀNA. The table on the next page shows the chief statistics of population in 1901.

Population.

Nearly three-fourths of the population are Hindus, only 10.6 per cent. being Sikhs, though Jīnd is one of the principal Sikh States in the Punjab. The remainder are Muhammadans (nearly 14 per

cent.), with a few Jains in the Dādri *tahsil*. The majority of the people speak Bāngru, or its kindred dialects of Bāgri and Ahīrwatī, Punjābī being spoken only in the Sangrūr *tahsil*.

<i>Tahsil.</i>	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Sangrūr	242	2	95	64,681	267	+ 8.6	3,142
Jind	464	2	163	124,954	269	+ 0.9	2,679
Dādri	562	3	181	92,368	164	- 8.7	2,008
State total	1,268	7	439	282,003	222	- 0.9	7,829

NOTE.—The figures for the areas of *tahsils* are taken from revenue returns. The total area of the State is that given in the *Census Report*.

More than 33 per cent. of the population are Jāts, the Sidhu tribe, to which the ruling family belongs, being strong in Sangrūr and the Sheorān in Dādri. Rājputs and Ahīrs also form important castes in Dādri. The latter are exclusively Hindus. About 66 per cent. of the population are dependent on agriculture. A branch of the Reformed Presbyterian Mission is established at Sangrūr; and 80 Christians, mostly members of the railway community at Jind, were enumerated in the State in 1901.

Dādri *tahsil* is almost devoid of irrigation, and its conditions therefore differ completely from those of Sangrūr and Jind. Of these,

Agriculture. Sangrūr is now commanded by the Sirhind Canal,

and its agricultural system has in consequence undergone great changes, being now superior to that of Jind. Formerly an arid tract with sparse cultivation, its virgin soil has been rendered cultivable by the canal. Jind is irrigated from the Hānsi branch of the older Western Jumna Canal, and its soil suffers both from excess of moisture and from exhaustion. Dādri is an arid, sandy tract, exposed to violent dust-storms in the hot season, and the sowing of either harvest depends entirely on the seasonal rains.

The State is mostly held by communities of small peasant proprietors, though large estates cover about 400 square miles. The following table gives the main statistics of cultivation in 1903-4, areas being in square miles :—

<i>Tahsil.</i>	Total.	Cultivated.	Irrigated.	Cultivable waste.
Sangrūr	252	203	71	35
Jind	489	386	77	38
Dādri	591	238	14	39
Total	1,332	827	162	112

In Sangrūr and Jīnd the principal harvest is the spring crop, in which wheat and barley and gram, mixed with mustard, are grown, cotton and sugar-cane (and in Sangrūr maize) being cultivated for the autumn harvest. In Dādri wheat is rarely sown except on lands irrigated from wells, and the main harvest is in the autumn, when millet is the staple crop. Pulses are sown with millet, which is also grown to some extent in Jīnd. Gram is the staple crop of the spring harvest.

In the Jīnd *tahsīl* rent is taken either in cash or by division of produce. Cash rents vary from Rs. 1-3-3 to Rs. 1-9-3 for unirrigated land, while for irrigated land Rs. 4-12-9 is paid on cotton and double that amount on sugar-cane. Where the less valuable irrigated crops are grown, rent is paid in kind, the landlord taking one-fourth of the produce. In the Dādri *tahsīl* kind rents are very rare. From R. 0-12-9 to Rs. 3 per acre is paid for unirrigated land, and Rs. 4 to Rs. 5 for land watered from wells. In the Sangrūr *tahsīl* rent is taken by division of crops. The rates are the same as in the Jīnd *tahsīl*. The construction of railways has tended to equalize the prices of grain in different parts of the State.

Apart from the extension of canals, the State has since 1891 advanced Rs. 8,000 for the construction of wells for irrigation and drinking purposes, and nearly Rs. 16,000 more has been provided from village funds. There is a State bank in each *tahsīl*, by which advances are made at half the ordinary rates of interest. The cultivated area increased by 4.5 per cent. between 1881 and 1901, but there is little room for further extension.

Dādri, which lies close to Hariāna, is the main cattle-breeding tract, the animals resembling the famous Hariāna breed. Camels are also reared by the Rahbāris in this *tahsīl*, and used both for ploughing and carrying, as well as for riding. A good type of milch buffalo is found in Jīnd. The State maintains three Reserves in which grazing is allowed on payment.

The State owns 7.6 per cent. of the Sirhind Canal. Of the total area cultivated in 1903-4, 162 square miles, or more than 13 per cent., were classed as irrigated. Of this area, 37 square miles were irrigated from wells, 121 from canals, and 4 from streams. There are 2,292 masonry wells in use, besides 289 unbricked wells, lever wells, and water-lifts. Wells are virtually confined to Sangrūr and Dādri, as the cost of making them is prohibitive in the Jīnd *tahsīl*. The bucket and rope are commonly used, but a few Persian wheels are found in one part of the State. In 1903-4, 27 square miles were irrigated from the Sirhind Canal and 4 from the Ghaggar river and other streams in Sangrūr, while in the Jīnd *tahsīl* the Western Jumna Canal irrigated 60 square miles. The Hānsi and Būtāna branches of the Western Jumna Canal

were managed by the British Government prior to 1888. In that year, however, an agreement was made by which the State took over distributaries irrigating 60,000 acres on payment of Rs. 1,20,000, less the cost of maintenance, &c., giving a net amount of about Rs. 1,05,500 a year payable to Government. The State is also allowed to irrigate 10,000 acres free of water rate, if there is a sufficient supply of water in the canal. The Bhiwāni branch, still under British management, irrigates about 2,300 acres in this *tahsīl*, for which the State pays the water rates fixed for British villages, plus 50 per cent. in lieu of owner's rate.

The only forests are the three Reserves already mentioned. These are called *birs* and have an area of 2,623 acres. While yielding an income of over Rs. 2,000 in normal years, they also form valuable fodder reserves for the cattle in time of famine.

The State contains no mines or minerals, with the exception of stone and *kanhar* quarries and saltpetre, the last of which yields a revenue of nearly Rs. 15,000. Stone is quarried in the Dādri *tahsīl*, but most of it is used locally.

The only industries of any importance are the manufacture of gold and silver ornaments, leathern and wood-work, cotton cloth, and rude pottery. The towns of Sangrūr and Dādri are noted for their leathern goods, shoes, harness, and well-gear; and in the former good furniture of English pattern is made. In the Sangrūr *tahsīl* embroidery is done by women for local sale and some of it is exported. There is some turnery at Dādri. The only factory is a steam cotton-ginning and pressing factory at Jind town, which in 1903-4 gave employment to 120 persons.

Trade and communications.

Large quantities of grain are exported through Sangrūr, Jind, and Dādri. Other exports are cotton, *ghū*, and oilseeds, while the chief imports are refined sugar and cotton cloth.

The Ludhiāna-Dhūri-Jākhāl Railway was opened in 1901, the State finding four-fifths of the capital for its construction. It connects Sangrūr, the capital, with Dhūri Junction on the Rājputra-Bhatinda branch of the North-Western Railway and with Jākhāl Junction on the Southern Punjab Railway, and is managed by the North-Western Railway in return for 55 per cent. of the gross earnings. The Southern Punjab Railway has three stations in the Jind *tahsīl*, and the Rājput-āna-Mālwa Railway two in Dādri. Sangrūr is also connected by metalled roads with Dhūri and Patialā, and with Jind by a partially metalled road. The State contains 42 miles of metalled roads and 191 miles of unmetalled roads. The postal and telegraphic arrangements are similar to those in PATIALA.

In common with the rest of the Punjab, the State suffered from the

famines of 1783, 1803, 1812, 1824, and 1833. That of 1860-1 also affected the State, especially the Dādri *tahsīl*, and half a year's revenue was remitted, advances for the purchase of cattle and seed being also given. In 1869-70 a fodder famine caused great losses of cattle, and a fifth of the revenue was remitted in the Jīnd *tahsīl*, advances being also made in Dādri. In 1877-8 the scarcity was more severe and was met by loans from the State banks. In 1883-4 a fodder famine again caused great loss of cattle, and revenue was largely suspended. In 1896 famine reappeared, and Rs. 27,500 was allotted for relief works, 7,000 maunds of grain were distributed as advances for seed, and Rs. 3,000 spent in charitable relief; and though the scarcity was intensified in 1897, the losses were not severe. In 1899 the crops failed again before the people had had time to recover from the effects of the preceding famine. Two months after the opening of relief works in October, 1899, it was resolved to concentrate the famine-stricken people on the Ludhiāna-Dhūri-Jākhāl Railway. The highest daily average (1,260) was reached in March, 1900. Works were not closed until December, 1900, and the total expenditure on them exceeded Rs. 40,000. Poorhouses were also opened and relief given privately at a cost of nearly Rs. 23,000, excluding the expenditure on additional dispensaries and the relief of immigrants. On the conclusion of the famine, Rs. 1,58,000 was advanced to the people for the purchase of cattle and seed, bringing up the total expenditure incurred by the State to Rs. 2,27,000.

The Agent to the Lieutenant-Governor of the Punjab for Jīnd is the Political Agent for the Phūlkiān States and Bahāwalpur, who resides at Patīālā. The administration of the State is divided between four departments. Foreign affairs and education are controlled by the foreign minister. The *Diwān* controls finance, excise, and revenue; the *Bakhshī Khāna* under the commander-in-chief is responsible for the army and the police, and the *Adālatī* or minister of justice for civil and criminal justice. The heads of these departments sitting together form a State Council known as the *Sadr Alā*, to which each of the ministers individually is subordinate. The Council again is controlled by the *Rājā*. The accountant-general's office was established in 1899. For administrative purposes the State is divided into two *nizāmat*s and three *tahsīl*s. Each *tahsīl* is further subdivided into police circles, the Sangrūr *tahsīl* containing three, Jīnd and Dādri two each. Each *nizāmat* is administered by a *nāzim*, under whom is a *tahsildār* in each *tahsīl*.

In each *nizāmat* the *nāzim* and *tahsildārs* exercise judicial powers, and in 1899 a subdivisional magistrate was appointed in the Dādri *tahsīl*. The *nāzim* corresponds roughly to a District Magistrate, and from his decisions appeals lie to the *Sadr Adālat*, which is presided

over by the Adālati. Further appeals lie to the *Sadr Alā*, which is subordinate to the *Ijlās-i-Khās*, or court of the Rājā. All these courts exercise both civil and criminal jurisdiction. The Indian Penal Code and Criminal Procedure Code are in force in the State, with certain modifications.

The principal feudatory is the Sardār of Badrukhān, the representative of the junior branch of the ruling family. The *jāgīr* is worth Rs. 8,843 per annum, and is subject to the usual incidents of lapse and commutation. The Rājā of Nābha is a member of this family.

In the time of Rājā Gajpat Singh the State consisted only of the four *parganas* of Jind, Safidon, Sangrūr, and Bālānwālī, with a revenue of about 3 lakhs. Before the settlements made by Rājā Sarūp Singh, a fluctuating system of assessment was in vogue, including *batai*, *kan-kūt*, and cash rates fixed on the nature of crops. The settlements were made in different years for each *tahsil*. Between 1857 and 1866 a summary settlement of the Sangrūr and Jind *tahsils* was conducted, resulting in a total demand of 3.2 lakhs. Shortly after this a regular settlement of the whole State was made, which produced a fixed revenue of 5.9 lakhs. In both of these settlements the *batai* system was partly continued. Two regular settlements followed, when cash rates were introduced throughout. The assessment of the fourth settlement was 6.2 lakhs. Revenue rates on unirrigated land vary from a minimum of R. 0-4-1 in Dādri to a maximum of Rs. 1-12-10 in Sangrūr, and on irrigated land from a minimum of R. 0-6-1 in Dādri to a maximum of Rs. 2-5-9 in Sangrūr.

The collections of land revenue alone and of total revenue (including cesses) are shown below, in thousands of rupees :—

	1880-1.	1890-1.	1900-1.	1903-4.
I and revenue . . .	7,14	7,15	8,03	7,54
Total revenue . . .	10,71	12,07	14,93	16,04

Apart from land revenue, the principal sources of revenue, with the amounts derived from each in 1903-4, are as follows: canals (2.5 lakhs), railways (1.2 lakhs), and stamps (0.6 lakh). The principal heads of expenditure are army (2.7 lakhs), canals (1.2 lakhs), public works (0.9 lakh), police (0.5 lakh), and miscellaneous (8.8 lakhs).

The income derived from excise in 1903-4 was Rs. 29,000. Liquor is distilled on premises which belong to the State, under the supervision of State officials, and still-head duties are levied of Rs. 2-8-0 per proof gallon and Rs. 2 per gallon of 25° under proof. The arrangement regarding the import of Mālwa opium is similar to that which obtains in the case of Patiala, but the quantity allowed to Jind at the lower rate never exceeds 19 chests. The duty paid on this opium is refunded

to the State, with the object of securing the co-operation of the officials in the suppression of smuggling. The import of opium from Dādri into British territory is prohibited. The contracts for the retail sale of opium, drugs, and liquor are auctioned, and wholesale licences are granted on payment of a fixed fee. The excise arrangements are under the control of a Superintendent, who is subordinate to the Diwān.

The mint is controlled by the State treasurer, but, as in the case of Patiāla, coins are struck only on special occasions, and these can hardly be said to be current coinage. The Jīnd rupee bears an inscription similar to that on the Patiāla rupee, to the effect that it is struck under the authority of Ahmad Shāh Durrāni. (See article on PATIĀLA.) The value of the coin is about 12 annas. Gold coins are also struck.

The towns of SANGRŪR, JĪND, SAFĪDON, and DĀDRI have been constituted municipalities.

The expenditure on public works in 1903-4 was Rs. 90,854; and the principal buildings erected by the department since 1900 are the Ranbīr College, the Ranbīr Ganj, the Record Office, and the Female Hospital, all at Sangrūr.

The State army consists of a battalion of Imperial Service infantry, 600 strong, with all necessary transport; and a local force of 220 cavalry, 560 infantry, 80 artillery, and 16 serviceable guns.

The police force had in 1903-4 a total strength of 405 of all ranks, and the village watchmen numbered 523. The police force is controlled by an Inspector-General, under whom there is a Superintendent for each of the three *tahsils*, and a deputy-inspector for each of the seven police stations. The principal jail is at Sangrūr. It has accommodation for 320 prisoners, and is managed by a *dāroga* under the supervision of the Adālatī. The chief jail industries are printing, weaving, bookbinding, and the making of *daris* (cotton carpets), paper, webbing, and rope.

In 1901 the proportion of literate persons was 2.8 per cent. (5 males and 0.2 females). The number of pupils under instruction was 602 in 1890-1, 791 in 1900-1, and 730 in 1903-4. In the last year the State had 4 secondary and 7 primary and special (public) schools, and 15 elementary (private) schools, with 3 girls in the private schools. The eleven institutions classed as public were all managed by the Educational department of the State. The existing system dates from 1889, when the old State schools at Sangrūr, Jīnd, Dādri, and Safīdon were remodelled, so as to bring them into line with the regulations of the Punjab Educational department. In 1894 the school at Sangrūr was raised to the status of a high school, and in 1902 the Diamond Jubilee College was completed at that town. The expenditure of

the State on education was Rs. 9,300 in 1892-3 and Rs. 10,400 in 1903-4.

The State contains 3 hospitals and 6 dispensaries, with accommodation for 64 in-patients. In 1903-4 the number of cases treated was 29,129, of whom 166 were in-patients, and 867 operations were performed. The expenditure was Rs. 17,815. The medical department is in charge of the State Medical officer.

Vaccination, which is compulsory throughout the State, is carried out by a staff of four vaccinators under an inspector. In 1903-4 the number of vaccinations performed was 4,752, representing 16.9 per 1,000 of the population.

Revenue survey maps were prepared for each *tahsīl* at the first settlement. They were revised during the second and third settlements, and during the fourth settlement a fresh survey of Jīnd and Sangrūr was made and new maps were prepared. For the Jīnd *tahsīl*, a map on the 4-inch scale was made. The first trigonometrical survey was made between 1847 and 1849, and maps were published on the 1-inch and 2-inch scales. A 4-inch map of the Cis-Sutlej States was published in 1863, and a revised edition of it in 1897. The 1-inch maps prepared in 1847-9 were revised in 1886-92.

[H. A. Rose, *Phūlkīān States Gazetteer* (in the press); L. H. Griffin, *The Rājās of the Punjab* (second edition, 1873).]

Jīnd Nizāmat.—South-eastern *nizāmat* or administrative district of Jīnd State, Punjab, lying between 28° 24' and 29° 28' N. and 75° 55' and 76° 48' E., with an area of 1,080 square miles. It comprises the two *tahsīls* of JĪND and DĀDRI. The population in 1901 was 217,322, compared with 225,039 in 1891. The *nizāmat* contains five towns, JĪND, the head-quarters, SAFĪDON, DĀDRI, KALĪĀNA, and Braund; and 344 villages. The land revenue and cesses in 1903-4 amounted to 4.7 lakhs.

Jīnd Tahsīl.—Northern *tahsīl* of the Jīnd State and *nizāmat*, Punjab, lying between 29° 2' and 29° 28' N. and 76° 15' and 76° 48' E., with an area of 489 square miles. It forms a compact triangle, almost entirely surrounded by the British Districts of Karnāl, Delhi, Rohtak, and Hissār, while on the north it is bounded by the Narwāna *tahsīl* of Patiāla. It lies entirely in the natural tract known as the Bāngar, and includes a part of the Nardak or KURUKSHETRA, the sacred land of the Hindus. The population in 1901 was 124,954, compared with 123,898 in 1891. The *tahsīl* contains two towns, JĪND (population, 8,047), the head-quarters, and SAFĪDON (4,832); and 163 villages. The land revenue and cesses in 1903-4 amounted to 2.3 lakhs.

Jīnd Town.—Head-quarters of the Jīnd *nizāmat* and *tahsīl*, Jīnd State, Punjab, situated in 29° 20' N. and 76° 19' E., on the Southern

Punjab Railway, 60 miles south-east of Sangrūr, the modern capital, and 25 miles north-west of Rohtak. Population (1901), 8,047. It was formerly the capital of the State to which it gave its name, and the Rājās of Jind are still installed here. It lies in the holy tract of Kurukshetra; and tradition ascribes its foundation to the Pāndavas, who built a temple here to Jainti Devī, the 'goddess of victory,' round which sprang up the town Jaintapuri, since corrupted into Jind. Of little importance in the Muhammadan period, it was seized by Gajpat Singh, the first Rājā of Jind, in 1755. Rahīm Dād Khān was sent by the Delhi government in 1775 to recover it, but was defeated and killed. His tomb is still to be seen at the Safidon Gate, and trophies of the victory are preserved in the town. It contains many ancient temples, and several places of pilgrimage. The fort of Fatehgarh, part of which is now used as a jail, was built by Rājā Gajpat Singh. The municipality has an income of Rs. 7,210, chiefly from octroi; and there is a considerable local trade.

Jinjirām.—River of Assam, which rises in the Urpād *bīl*, Goālpara District, and flows through the southern portion of that District till it falls into the Brahmaputra, south of Mānikarchar, after a course of 120 miles. The most important places on its banks are Lakhipur, South Sālmāra, and Singimāri. Above Sālmāra the country is under water during the rains, and boats of 4 tons burden can proceed as far as Lakhipur. In the dry season they cannot get above Singimāri. The river serves as a trade route for the southern portion of Goālpara and the Gāro Hills.

Jintūr.—Northern *tāluk* of Parbhani District, Hyderābād State, with an area of 952 square miles. Including *jāgīrs*, the population in 1901 was 87,797, compared with 123,546 in 1891, the decrease being due to the famine of 1900. The *tāluk* contains 297 villages, of which 37 are *jāgīrs*, and Jintūr (population, 3,688) is the head-quarters. The land revenue in 1901 was 3.2 lakhs. The *tāluk* lies between the rivers Pūrna (north) and Dudna (south). The soils are mainly alluvial and *regar*.

Jiral Kāmsoli.—Petty State in REWĀ KĀNTHA, Bombay.

Jirang.—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 723, and the gross revenue in 1903-4 Rs. 2,245. The principal products are rice, millet, ginger, caoutchouc, and cotton.

Jiri.—River of Assam, which rises on the southern slopes of the Barail, and, after a southerly course of 75 miles, falls into the Barāk or Surmā. For nearly the whole of its length it forms the boundary between Cāchār District and the State of Manipur, and it is crossed at Jirighāt by a ferry, which is maintained for the use of travellers along the Silchar-Manipur road. The greater part of its course lies through

hilly country, and there is very little cultivated land in the vicinity. The only traffic brought down by the river consists of forest produce and tea from a garden situated at Jirighāt, about 5 miles above its confluence with the Barāk.

Jobat.—A guaranteed chiefship in Central India, under the Bhopāwar Agency, lying between $22^{\circ} 21'$ and $22^{\circ} 30'$ N. and $74^{\circ} 28'$ and $74^{\circ} 50'$ E., with an area of about 140 square miles. It is bounded on the north by the Jhābua State; on the south and west by Ali-Rājpur; and on the east by Gwalior. Jobat lies entirely in the hilly tract of the Vindhya, and is intersected by a succession of short ranges and narrow valleys covered with thick jungle. The geological formations met with are of unusual interest. In the immediate neighbourhood of the town of Jobat, and covering a considerable area round it, is an outcrop of a peculiar jaspideous, ferruginous rock, while the greater part of the State is occupied by gneissose and schistose rocks. Along the northern border the Lametas are represented by the Nimār sandstone and Bāgh limestones, overlaid by trap. The annual rainfall averages about 30 inches.

There is some uncertainty as to the founder of this State; but the best-supported account relates that the territory passed to Kesar Deo, great-grandson of Anand Deo, the founder of Ali-Rājpur, in the fifteenth century. On the establishment of British supremacy, Rānā Sabal Singh was in possession, and was succeeded by Rānā Ranjit Singh, who died in 1874. Ranjit Singh in 1864 agreed to cede all land which might at any time be required for railways through his State. He was followed by Sarūp Singh, who died in 1897, and was succeeded by the present chief, Indrajit Singh, who is still a minor, and is being educated at the Daly College at Indore. The title of Rānā is borne by the rulers of Jobat.

Population has been: (1881) 9,387, (1891) 15,047, and (1901) 9,443, giving a density of 67 persons per square mile. The decrease of 37 per cent. during the last decade is due mainly to the famine of 1899-1900. Animists (chiefly Bhils and Bhilālas) number 8,131, or 86 per cent. of the total.

The general fertility of the soil is low, and the Bhils, who form the greater part of the population, are indifferent agriculturists. The total area is thus distributed: cultivated, 32 square miles, of which only 62 acres can be irrigated; cultivable but not under cultivation, 30 square miles; waste and forest land, 78 square miles. Of the cropped area, *urd* occupies 17 square miles, or 53 per cent.; maize, 10 square miles; and *jowār*, 7 square miles.

The forest area, which covers almost the whole of the uncultivable portion of the State, has since 1902 been in charge of the Agency Forest officer. Asbestos has been found in some quantity, but the

quality is poor, and an attempt to work it proved a failure. Trade generally has increased, especially the export of grain, which is carried to Dohad on the Godhra-Ujjain section of the Bombay, Baroda, and Central India Railway by a fair-weather road, 40 miles in length. A British post office has been opened at Ghora village; the nearest telegraph office is at Bāgh in the Amjhera district of Gwalior, 15 miles distant.

The State is divided into five *thānas*—Jobat, Guda, Hirāpur, Thapli, and Juāri—under two *thānadārs*, who are the revenue collectors. Owing to the chief's minority, the State is at present administered by the Political Agent, through a Superintendent, all matters of importance being dealt with by him. The total revenue is Rs. 21,000, of which Rs. 8,300 is derived from land, Rs. 2,700 from forests, and Rs. 4,000 from excise. The general administration, including the chief's establishment, costs Rs. 15,000 a year. The incidence of the land revenue demand is 9 annas per acre of cultivated land and 2 annas per acre of total area. The jail is at Jobat, and a vernacular school is maintained at Ghora. In 1901 only one per cent. of the population (almost all males) could read and write.

Jobat village, containing the residence of the chief, is situated in $22^{\circ} 27' N.$ and $74^{\circ} 37' E.$ Population (1901), 208. It is reached from the Dohad or Meghnagar stations on the Ratlām-Godhra section of the Bombay, Baroda, and Central India Railway, the stations being 40 miles distant by fair-weather road from the village. The administrative head-quarters, however, are at Ghora, 2 miles south of Jobat. Population (1901), 1,154. The State is often called Ghora-Jobat by natives, on account of its two capitals.

Jodhpur State (also called Mārwar). The largest State in Rājputāna, having an area of 34,963 square miles, or more than one-fourth of the total area of the Agency. It lies between $24^{\circ} 37'$ and $27^{\circ} 42' N.$ and $70^{\circ} 6'$ and $75^{\circ} 22' E.$ It is bounded on the north by Bikaner; on the north-west by Jaisalmer; on the west by Sind; on the south-west by the Rann of Cutch; on the south by Pālanpur and Sirohi; on the south-east by Udaipur; on the east by Ajmer-Merwāra and Kishangarh; and on the north-east by Jaipur. The country, as its name Mārwar (= 'region of death') implies, is sterile, sandy, and inhospitable. There are some comparatively fertile lands in the north-east, east, and south-east in the neighbourhood of the Arāvalli Hills; but, generally speaking, it is a dreary waste covered with sandhills, rising sometimes to a height of 300 or 400 feet, and the desolation becomes more absolute and marked as one proceeds westwards. The northern and north-western portion is a mere desert, known as the *thal*, in which, it has been said, there are more spears than spear-grass heads,

**Physical
aspects.**

and blades of steel grow better than blades of corn. The country here resembles an undulating sea of sand ; an occasional oasis is met with, but water is exceedingly scarce and often 200 to 300 feet below the surface. The ARĀVALLI HILLS form the entire eastern boundary of the State, the highest peak within Jodhpur limits being in the south-east (3,607 feet above the sea). Several small offshoots of the Arāvallis lie in the south, notably the Sūnda hills (Jaswantpura), where a height of 3,252 feet is attained, the Chappan-kā-pahār near Siwāna (3,199 feet), and the Roja hills at Jālor (2,408 feet). Scattered over the State are numerous isolated hills, varying in height from 1,000 to 2,000 feet. The only important river is the LŪNĪ. Its chief tributaries are the Līlri, the Raipur Lūni, the Guhiya, the Bāndi, the Sukri, and the Jawai on the left bank, and the Jojri on the right. The principal lake is the famous salt lake at SĀMBHAR. Two other depressions of the same kind exist at Didwāna and Pachbhadra. There are a few *jhils* or marshes, notably one near Bhatki in the south-west, which covers an area of 40 or 50 square miles in the rainy season, and the bed of which, when dry, yields good crops of wheat and gram.

A large part of the State is covered by sand-dunes of the transverse type, that is, with their longer axes at right angles to the prevailing wind. Isolated hills of solid rock are scattered over the plain. The oldest rocks found are schists of the Arāvalli system, and upon them rests unconformably a great series of ancient subaerial rhyolites with subordinate bands of conglomerate, the Mallāni series. These cover a large area in the west and extend to the capital. Coarse-grained granites of two varieties, one containing no mica and the other both hornblende and mica, are associated with the rhyolites. Near the capital, sandstones of Vindhyan age rest unconformably upon the rhyolites. Some beds of conglomerate, showing traces of glacial action, have been found at Pokaran and are referred to the Tālcher period. Sandstones and conglomerates with traces of fossil leaves occur at Bārmer, and are probably of Jurassic age. The famous marble quarries of Makrāna are situated in Jodhpur territory, the marble being found among the crystalline Arāvalli schists.

The eastern and some of the southern districts are well wooded with natural forests, the most important indigenous timber-tree being the *babul* (*Acacia arabica*), the leaves and pods of which are used as fodder in the hot season, while the bark is a valuable tanning and dyeing agent. Among other trees may be mentioned the *mahuā* (*Bassia latifolia*), valuable for its timber and flowers ; the *anwal* (*Cassia auriculata*), the bark of which is largely used in tanning ; the *dhāk* or *palās* (*Butea frondosa*), the *dhao* (*Anogeissus pendula*), the *gūlar* (*Ficus glomerata*), the *siris* (*Albizzia Lebbek*), and the *khair* (*Acacia Catechu*). Throughout the plains the *kheira* (*Prosopis spicigera*), the *rohira* (*Tecoma*

undulata), and the *nīm* (*Melia Azadirachta*) are common, and the tamarind and the *bar* (*Ficus bengalensis*) are fairly so. The *pīpal* (*Ficus religiosa*), a sacred tree, is found in almost every village. The principal fruit trees are the pomegranate (*Punica Granatum*), the Jodhpur variety of which is celebrated for its delicate flavour, and the *nīmbu* or lime-tree. In the desert the chief trees are two species of the *ber* (*Zizyphus Jujuba* and *Z. nummularia*), which flourish even in years of scanty rainfall, and furnish the main fodder and fruit-supply of this part of the country; and the *khejra*, which is not less important, as its leaves and shoots provide the inhabitants with vegetables (besides being eaten by camels, goats, and cattle), its pods are consumed as fruits, its wood is used for roofs, carts, and agricultural implements or as fuel, and its fresh bark is, in years of famine, stripped off and ground with grain to give the meagre meal a more substantial bulk.

The fauna is varied. Lions are now extinct, the last four having been shot near Jaswantpura about 1872, and the wild ass (*Equus hemionus*) is seldom, if ever, seen. Tiger, *sāmbar* (*Cervus unicolor*), and black bears are found in the Arāvallis and the Jaswantpura and Jālōr hills, but in yearly decreasing numbers. Wild hog are fairly numerous in the same localities, but are scarcer than they used to be in the low hills adjacent to the capital. Leopards and hyenas are generally plentiful, and *nīlgai* (*Boselaphus tragocamelus*) are found in some of the northern and eastern districts. Indian gazelle abound in the plains, as also do antelope, save in the actual desert; but the *chital* (*Cervus axis*) is seen only on the slopes of the Arāvallis in the south-east. Wolves are numerous in the west, and wild dogs are occasionally met with in the forests. In addition to the usual small game, there are several species of sand-grouse (including the imperial), and two of bustard, namely, the great Indian (*Eupodotis edwardsi*) and the *houbārā* (*Houbara macqueni*).

The climate is dry, even in the monsoon period, and characterized by extreme variations of temperature during the cold season. The hot months are fairly healthy, but the heat is intense; scorching winds prevail with great violence in April, May, and June, and sand-storms are of frequent occurrence. The climate is often pleasant towards the end of July and in August and September; but a second hot season is not uncommon in October and the first half of November. In the cold season (November 15 to about March 15) the mean daily range is sometimes as much as 30°, and malarial and other fevers prevail. An observatory was opened at Jodhpur city in October, 1896, and the average daily mean temperature for the nine years ending 1905 has been nearly 81° (varying from 62.7° in January to 94.2° in May). The mean daily range is about 25° (16.6° in August and 30.5° in November). The highest temperature recorded since the observatory

was established has been 121° on June 10, 1897, and the lowest 28° on January 29, 1905.

The country is situated outside the regular course of both the south-west and north-east monsoons, and the rainfall is consequently scanty and irregular. Moreover, even in ordinary years, it varies considerably in different districts, and is so erratic and fitful that it is a common saying among the village folk that 'sometimes only one horn of the cow lies within the rainy zone and the other without.' The annual rainfall for the whole State averages about 13 inches, nearly all received in July, August, and September. The fall varies from less than 7 inches at Sheo in the west to about 13 inches at the capital, and nearly 18½ inches at Jaswantpura (in the south) and Bāli in the south-east. The heaviest fall recorded in any one year was over 55½ inches at Sānchor (in the south-west) in 1893, whereas in 1899 two of the western districts (Sheo and Sānkra) received but 0.14 inch each.

The Mahārājā of Jodhpur is the head of the Rāthor clan of Rājputs, and claims descent from Rāma, the deified king of AJOṆHVĀ.

The original name of the clan was Rāshtra ('protector'), and subsequently eulogistic suffixes and prefixes were attached, such as Rāshtrakūta (*kūta* = 'highest') or Mahārāshtra (*mahā* = 'great'), &c. The clan is mentioned in some of Asoka's edicts as rulers of the Deccan, but their earliest known king is Abhimanyu of the fifth or sixth century A.D., from which time onward their history is increasingly clear. For nearly four centuries preceding A.D. 973 the Rāshtrakūtas gave nineteen kings to the Deccan; but in the year last mentioned they were driven out by the Chālukyas (Solanki Rājputs) and sought shelter in Kanauj, where a branch of their family is said to have formed a settlement early in the ninth century. Here, after living in comparative obscurity for about twenty-five years, they dispossessed their protecting kinsmen and founded a new dynasty known by the name of Gaharwār. There were seven kings of this dynasty (though the first two are said to have never actually ruled over Kanauj), and the last was Jai Chand, who in 1194 was defeated by Muhammad Ghorī, and, while attempting to escape, was drowned in the Ganges. The nearer kinsmen of Jai Chand, unwilling to submit to the conqueror, sought in the scrub and desert of Rājputāna a second line of defence against the advancing wave of Muhammadan conquest. Siāhji, the grandson (or, according to some, the nephew) of Jai Chand, with about 200 followers, 'the wreck of his vassalage,' accomplished the pilgrimage to Dwārka, and is next found conquering Kher (in MALLĀNĪ) and the neighbouring tract from the Gohel Rājputs, and planting the standard of the Rāthors amidst the sandhills of the Lūni in 1212. About the same time a community of Brāhmans held the city and extensive lands of Pāli, and, being greatly harassed by Mers,

Bhils, and Minās, invoked the aid of Siāhjī in dispersing them. This he readily accomplished ; and, when subsequently invited to settle in the place as its protector, celebrated the next Holī festival by putting to death the leading men, and in this way adding the district to his conquests. The foundation of the State now called Jodhpur thus dates from about 1212 ; but this was not the first appearance of the Rāthors in Mārwar, for, as the article on BĀLI shows, five of this clan ruled at Hathūndi in the south-east in the tenth century. In Siāhjī's time, however, the greater part of the country was held by Parihār, Gohel, Chauhān, or Paramāra Rājputs. The nine immediate successors of Siāhjī were engaged in perpetual broils with the people among whom they had settled, and in 1381 the tenth, Rao Chonda, accomplished what they had been unable to do. He took MANDOR from the Parihār chief, and made his possession secure by marrying the latter's daughter. This place was the Rāthor capital for the next seventy-eight years, and formed a convenient base for adventures farther afield, which resulted in the annexation of Nāgaur and other places before the Rao's death about 1409. His son and successor, Ran Mal, who was a brother-in-law of Rānā Lākhā, appears to have spent most of his time at Chitor, where he interfered in Mewār politics and was assassinated in an attempt to usurp the throne of the infant Rānā Kūmbha. The next chief was Rao Jodha, who, after annexing Sojat in 1455, laid the foundation of Jodhpur city in 1459 and transferred thither the seat of government. He had fourteen (or, according to some authorities, seventeen) sons, of whom the eldest, Sātāl, succeeded him about 1488, but was killed three years later in a battle with the Sūbahdār of Ajmer, while the sixth was Bika, the founder of the Bikaner State. Sātāl was followed by his brother Sūja, remembered as the 'cavalier prince,' who in 1516 met his death in a fight with the Pathāns at the Pipār fair while rescuing 140 Rāthor maidens who were being carried off. Rao Ganga (1516-32) sent his clansmen to fight under the standard of Mewār against the Mughal emperor, Bābar, and on the fatal field of Khānua (1527) his grandson Rai Mal and several other Rāthors of note were slain.

Rao Māldeo (1532-69) was styled by Firishta 'the most powerful prince in Hindustān' ; he conquered and annexed numerous districts and strongholds, and, in his time, Mārwar undoubtedly reached its zenith of power, territory, and independence. When the emperor Humāyūn was driven from the throne by Sher Shāh, he sought in vain the protection of Māldeo ; but the latter derived no advantage from this inhospitality, for Sher Shāh in 1544 led an army of 80,000 men against him. In the engagements that ensued the Afghān was very nearly beaten, and his position was becoming daily more critical, till at last he had recourse to a stratagem which secured for him so narrow

and barren a victory that he was forced to declare that he had 'nearly lost the empire of India for a handful of *bājra*'—an allusion to the poverty of the soil of Mārwar as unfitted to produce richer grain. Subsequently Akbar invaded the country and, after an obstinate and sanguinary defence, captured the forts of Merta and Nāgaur. To appease him, Māldeo sent his second son to him with gifts; but the emperor was so dissatisfied with the disdainful bearing of the desert chief, who refused personally to attend his court, that he besieged Jodhpur, forced the Rao to pay homage in the person of his eldest son, Udai Singh, and even presented to the Bikaner chief, a scion of the Jodhpur house, a formal grant for the State of Jodhpur together with the leadership of the clan. Rao Māldeo died shortly afterwards; and then commenced a civil strife between his two sons, Udai Singh and Chandra Sen, ending in favour of the latter, who, though the younger, was the choice of both his father and the nobles. He, however, ruled for only a few years, and was succeeded (about 1581) by his brother, who, by giving his sister, Jodh Bai, in marriage to Akbar, and his daughter Mān Bai to the prince Salīm (Jahāngīr), recovered all the former possessions of his house, except Ajmer, and obtained several rich districts in Mālwa and the title of Rājā. The next two chiefs, Sūr Singh (1595–1620) and Gaj Singh (1620–38), served with great distinction in several battles in Gujarāt and the Deccan. The brilliant exploits of the former gained for him the title of Sawai Rājā, while the latter, besides being viceroy of the Deccan, was styled Dalbhanjan (or 'destroyer of the army') and Dalthambhan (or 'leader of the host').

Jaswant Singh (1638–78) was the first ruler of Mārwar to receive the title of Mahārājā. His career was a remarkable one. In 1658 he was appointed viceroy of Mālwa, and received the command of the army dispatched against Aurangzeb and Murād, who were then in rebellion against their father. Being over-confident of victory and anxious to triumph over two princes in one day, he delayed his attack until they had joined forces, and in the end suffered a severe defeat at Fatehābād near Ujjain. Aurangzeb subsequently sent assurances of pardon to Jaswant Singh, and summoned him to join the army then being collected against Shujā. The summons was obeyed, but as soon as the battle commenced he wheeled about, cut to pieces Aurangzeb's rear-guard, plundered his camp, and marched with the spoils to Jodhpur. Later on he served as viceroy of Gujarāt and the Deccan, and finally in 1678, in order to get rid of him, Aurangzeb appointed him to lead an army against the Afghāns. He died in the same year at Jamrūd, and was succeeded by his posthumous son, Ajit Singh, during whose infancy Aurangzeb invaded Mārwar, sacked Jodhpur and all the large towns, destroyed the temples and commanded the conversion of the Rāthor race to Islām. This cruel policy cemented into one bond of union all

who cherished either patriotism or religion, and in the wars that ensued the emperor gained little of either honour or advantage. On Aurangzeb's death in 1707 Ajit Singh proceeded to Jodhpur, slaughtered or dispersed the imperial garrison, and recovered his capital. In the following year he became a party to the triple alliance with Udaipur and Jaipur to throw off the Muhammadan yoke. One of the conditions of this alliance was that the chiefs of Jodhpur and Jaipur should regain the privilege of marrying with the Udaipur family, which they had forfeited by contracting matrimonial alliances with the Mughal emperors, on the understanding that the offspring of Udaipur princesses should succeed to the State in preference to all other children. The allies fought a successful battle at Sāmbhar in 1709, and a year or so later forced Bahādur Shāh to make peace.

When the Saiyid brothers—'the Warwicks of the East'—were in power, they called upon Ajit Singh to mark his subservience to the Delhi court in the customary manner by sending a contingent headed by his heir to serve. This he declined to do, so his capital was invested, his eldest son (Abhai Singh) was taken to Delhi as a hostage, and he was compelled, among other things, to give his daughter in marriage to Farrukhsiyar and himself repair to the imperial court. For a few years Ajit Singh was mixed up in all the intrigues that occurred; but on the murder of Farrukhsiyar in 1719, he refused his sanction to the nefarious schemes of the Saiyids, and in 1720 returned to his capital, leaving Abhai Singh behind. In 1721 Ajit Singh seized Ajmer, where he coined money in his own name, but had to surrender the place to Muhammad Shāh two years later. In the meantime, Abhai Singh had been persuaded that the only mode of arresting the ruin of the Jodhpur State and of hastening his own elevation was the murder of his father; and in 1724 he induced his brother, Bakht Singh, to commit this foul crime. Abhai Singh ruled for about twenty-six years, and in 1731 rendered great service to Muhammad Shāh by capturing Ahmadābād and suppressing the rebellion of Sarbuland Khān.

On his death in 1750 his son Rām Singh succeeded, but was soon ousted by his uncle, Bakht Singh, the parricide, and forced to flee to Ujjain, where he found Jai Appa Sindhia and concerted measures for the invasion of his country. In the meantime Bakht Singh had met his death, by means, it is said, of a poisoned robe given him by his aunt or niece, the wife of the Jaipur chief; and his son, Bijai Singh, was ruling at Jodhpur. The Marāthās assisted Rām Singh to gain a victory over his cousin at Merta about 1756; but they shortly afterwards abandoned him, and wrested from Bijai Singh the fort and district of Ajmer and the promise of a fixed triennial tribute. After this, Mārwar enjoyed several years of peace, until the rapid strides made by the Marāthās towards universal rapine, if not conquest, compelled the principal Rājput States

(Mewār, Jodhpur, and Jaipur) once more to form a union for the defence of their political existence. In the battle of Tonga (1787) Sindhia was routed, and compelled to abandon not only the field but all his conquests (including Ajmer) for a time. He soon returned, however; and in 1790 his army under De Boigne defeated the Rājputs in the murderous engagements at Pātan (in June) and Merta (in September). In the result, he imposed on Jodhpur a fine of 60 lakhs, and recovered Ajmer, which was thus lost for ever to the Rāthors. Bijai Singh died about 1793, and was succeeded by his grandson, Bhīm Singh, who ruled for ten years.

At the commencement of the Marāthā War in 1803 Mān Singh was chief of Jodhpur, and negotiated first with the British and subsequently with Holkar. Troubles then came quickly upon Jodhpur, owing to internal disputes regarding the succession of Dhonkal Singh, a supposed posthumous son of Bhīm Singh, and a disastrous war with Jaipur for the hand of the daughter of the Mahārānā of Udaipur. The freebooter Amīr Khān espoused first the cause of Jaipur and then that of Jodhpur, terrified Mān Singh into abdication and pretended insanity, assumed the management of the State itself for two years, and ended by plundering the treasury and leaving the country with its resources completely exhausted. On Amīr Khān's withdrawal in 1817, Chhatar Singh, the only son of Mān Singh, assumed the regency, and with him the British Government commenced negotiations at the outbreak of the Pindāri War. A treaty was concluded in January, 1818, by which the State was taken under protection and agreed (1) to pay an annual tribute of Rs. 1,08,000 (reduced in 1847 to Rs. 98,000, in consideration of the cession of the fort and district of Umarkot), and (2) to furnish, when required, a contingent of 1,500 horse (an obligation converted in 1835 to an annual payment of Rs. 1,15,000—see the article on ERINPURA). Chhatar Singh died shortly after the conclusion of the treaty, whereupon his father, Mān Singh, threw off the mask of insanity and resumed the administration. Within a few months he put to death or imprisoned most of the nobles who, during his assumed imbecility, had shown any unfriendly feeling towards him; and many of the others fled from his tyranny and appealed for aid to the British, with the result that in 1824 the Maharājā was obliged to restore the confiscated estates of some of them. In 1827 the nobles again rebelled, and putting the pretender, Dhonkal Singh, at their head, prepared to invade Jodhpur from Jaipur territory. Lastly, in 1839, the misgovernment of Mān Singh and the consequent disaffection and insurrection in the State reached such a pitch that the British Government was compelled to interfere. A force was marched to Jodhpur, of which it held military occupation for five months, when Mān Singh executed an engagement to ensure future good government. He died in 1843, leaving no son; and by the choice

of his widows and the nobles and officials of the State, confirmed by Government, Takht Singh, chief of Ahmadnagar, became Mahārājā of Jodhpur, the claims revived by Dhonkal Singh being set aside. The Mahārājā did good service during the Mutiny, but the affairs of Mārwar fell into the utmost confusion owing to his misrule, and the Government of India had to interfere in 1868. In 1870 he leased to Government the Jodhpur share of the Sāmbhar Lake, together with the salt marts of Nāwa and Gūdhā. Takht Singh died in 1873, when he was succeeded by his eldest son, Jaswant Singh. The new administration was distinguished by the vigour and success with which dacoities and crimes of violence (formerly very numerous) were suppressed, by pushing on the construction of railways and irrigation works, improving the customs tariff, introducing a regular revenue settlement, &c. In fact, in every department a wise and progressive policy was pursued. No chief could have better upheld the character of his house for unswerving loyalty to Government, and the two fine regiments of Imperial Service cavalry raised by him are among the evidences of this honourable feeling. He was created a G.C.S.I. in 1875, and subsequently his salute (ordinarily 17 guns) was raised first to 19, and next to 21 guns. He died in 1895, leaving a strong and sound administration to his only son, Sardār Singh, who was born in 1880, and is the present Mahārājā. He was invested with powers in 1898, the administration during his minority having been carried on by his uncle, Mahārāj Prātap Singh (now the Mahārājā of Idar), assisted by a Council. The chief events of His Highness's rule have been : the employment of a regiment of his Imperial Service Lancers on the north-west frontier in 1897-8 and in China in 1900-1 ; the extension of the railway to the Sind border and thence to Hyderabad ; the great famine of 1899-1900 ; the conversion of the local into British currency in 1900 ; and his visit to Europe in 1901. Mahārājā Sardār Singh was a member of the Imperial Cadet Corps from January, 1902, to August, 1903.

The State is rich in antiquarian remains ; the most interesting are described in the articles on BĀLI, BHĪNMĀL, DĪDWĀNA, JĀLOR, MANDOR, NĀDOL, NĀGAUR, PĀLI, RĀNAPUR, and SĀDRI.

Excluding the 21 villages situated in the British District of Merwāra, which, under an arrangement made in 1885, are administered by the Government of India, but over which the Jodhpur Darbār still retains other rights, there were, in 1901, **Population.** 4,057 towns and villages in the State, the town of Sāmbhar being under the joint jurisdiction of the Jodhpur and Jaipur Darbārs. The population at each of the three enumerations was : (1881) 1,757,681, (1891) 2,528,178, and (1901) 1,935,565. The territory in 1901 was divided into 24 districts or *hukūmats* (since reduced to 23), and contained one city, JODHPUR (population, 79,109), the capital of the State and a municipi-

pality, and 26 towns. The principal towns are PHALODI (population, 13,924) and NĀGAUR (13,377) in the north, PĀLI (12,673) and SOJAT (11,107) in the east, and KUCHĀWAN (10,749) in the north-east. The following table gives the chief statistics of population in 1901 :—

<i>Hukūmat.</i>	Area in square miles.	Number of		Population.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.			
Jodhpur . . .	2,896	2	370	235,461	— 28.1	17,372
Bāli . . .	837	1	160	96,194	} — 22.8	3,777
Desuri } Godwār }	706	1	160	67,764		3,686
Bilāra . . .	792	2	88	57,794	— 32	4,196
Didwāna . . .	1,136	1	113	44,642	— 17.8	2,285
Jaitāran . . .	959	2	116	67,733	— 22.7	2,683
Jālor . . .	1,552	1	252	140,880	— 17.3	9,887
Jaswantpura . . .	1,300	1	198	83,370	— 25.3	5,179
Mallāni . . .	5,750	1	464	172,330	— 22.1	5,018
Mārot . . .	498	...	109	54,873	— 3.4	1,602
Merta . . .	1,618	1	370	142,854	— 30.6	8,040
Nāgaui . . .	2,608	4	420	167,759	— 33.5	9,096
Nāwa * . . .	302	2	12	24,960	— 20.9	1,930
Pachbhadra . . .	854	2	105	39,427	— 25.5	2,118
Pāli . . .	1,024	1	80	43,889	— 42.9	2,787
Parbatsar . . .	840	...	165	87,127	— 17	2,418
Phalodi . . .	2,624	2	71	59,619	— 17	5,130
Sāmbhar . . .	160	1	6	7,438	— 10.5	571
Sānchor . . .	1,776	...	231	70,401	— 26.6	1,668
Sānkra . . .	1,279	1	71	25,960	+ 157.7	1,009
Sheo . . .	2,004	...	65	24,405	— 19.4	459
Shergarh . . .	1,456	...	80	56,921	— 19.7	2,035
Siwāna . . .	760	...	112	53,931	— 16.7	2,210
Sojat . . .	1,172	1	212	109,833	— 22.5	9,685
State total	34,963	27	4,030	1,935,565	— 23.4	104,841

* Amalgamated with Sāmbhar in 1902-3.

The large decrease in the population since 1891 was due to a series of bad seasons culminating in the great famine of 1899-1900, and also to heavy mortality from cholera and fever at the end of the decade. The enormous increase in the population of the Sānkra district is ascribed mainly to the immigration of Bhāti Rājputs and others from Jaisalmer, while the small decreases in the Mārot and Sāmbhar districts (both in the north-east) seem to show that the famine was less severely felt there. Of the total population, 1,606,046, or nearly 83 per cent., are Hindus; 149,419, or nearly 8 per cent., Musalmāns; 137,393, or 7 per cent., Jains; and 42,235, or over 2 per cent., Animists. Among the Hindus there are some Dādūpanthis (a sect described in the article on NARAINA in the Jaipur State, which is their head-quarters), but their number was not recorded at the last Census. In addition to the two subdivisions of the sect mentioned in that article, there is a third which

is said to be peculiar to Jodhpur and is called Gharbāri. Its members marry and are consequently not recognized in Jaipur as true Dādūpanthis. Another sect of Hindus deserving of notice is that of the Bishnois, who number over 37,000, and derive their name from their creed of twenty-nine (*bis + nau*) articles. The Bishnois are all Jāts by tribe, and are strict vegetarians, teetotalers, and non-smokers; they bury their dead sometimes in a sitting posture and almost always at the threshold of the house or in the adjoining cattle-shed, take neither food nor water from any other caste, and have their own special priests. The language mainly spoken throughout the State is Mārwarī, the most important of the four main groups of Rājasthānī.

Among castes and tribes the Jāts come first, numbering 220,000, or over 11 per cent. of the total. They are robust and hard-working and the best cultivators in the State, famed for their diligence in improving the land. Next come the Brāhmans (192,000, or nearly 10 per cent.). The principal divisions are the Śrīmālis, the Sānchoras, the Pushkarnas, the Nandwāna Borāhs, the Chenniyāts, the Purohits, and the Pāliwāls. They are mostly cultivators, but some are priests or money-lenders or in service. The third most numerous caste is that of the Rājputs (181,000, or over 9 per cent.). They consider any pursuit other than that of arms or government as derogatory to their dignity, and are consequently indifferent cultivators. The principal Rājput clan is that of the ruling family, namely Rāthor, comprising more than 100 septs, the chief of which are Mertia, Jodha, Udāwat, Champāwat, Kūmpāwat, Karnot, Jaitāwat, and Karamsot. After the Rājputs come the Mahājans (171,000, or nearly 9 per cent.). They belong mostly to the Oswāl, Mahesrī, Porwāl, Saraogī, and Agarwāl subdivisions, and are traders and bankers, some having agencies in the remotest parts of India, while a few are in State service. The only other caste exceeding 100,000 is that of the Būlais, or Bhāmbis (142,000, or over 7 per cent.). They are among the very lowest castes, and are workers in leather, village drudges, and to a small extent agriculturists. Those who remove the carcasses of dead animals from villages or towns are called Dheds. Other fairly numerous castes are the Rebāris (67,000), breeders of camels, sheep, and goats; the Mālis (55,000), market-gardeners and agriculturists; the Chākars or Golās (55,000), the illegitimate offspring of Rājputs, on whom they attend as hereditary servants; and lastly the Kumhārs (51,000), potters, brick-burners, village menials, and, to a small extent, cultivators. Taking the population as a whole, more than 58 per cent. live by the land and about another 3 per cent. are partially agriculturists. Nearly 5 per cent. are engaged in the cotton industry or as tailors, &c.; more than 4 per cent. are stock-breeders and dealers, while commerce and general labour employ over 3 per cent. each.

Christians number 224, of whom 111 are natives. The United Free

Church of Scotland Mission has had a branch at Jodhpur city since 1885.

As already remarked, Jodhpur is, speaking generally, a sandy tract, improving gradually from a mere desert in the west to comparatively

Agriculture. fertile lands along the eastern border. The chief natural soils are *mattiyāli*, *bhūri*, *relli*, and *magra* or *tharra*. The first is a clayey loam of three kinds, namely *kāli* (black), *rūti* (red), and *pīli* (yellowish), and covers about 18 per cent. of the cultivated area. It does not need frequent manuring, but being stiff requires a good deal of labour; it produces wheat, gram, and cotton, and can be tilled for many years in succession. The second is the most prevalent soil (occupying over 58 per cent. of the cultivated area) and requires but moderate rains. It has less clay than *mattiyāli* and is brown in colour; it is easily amenable to the plough, requires manure, and is generally tilled for three or four years and then left fallow for a similar period. The third class of soil (*relli*) is fine-grained and sandy without any clay, and forms about 19 per cent. of the cultivated area. When found in a depression, it is called *dehrī*, and, as it retains the drainage of the adjacent high-lying land, yields good crops of *bājra* and *jowār*; but when on hillocks or mounds, it is called *dhora*, and the sand being coarse-grained, it is a very poor soil requiring frequent rest. *Magra* is a hard soil containing a considerable quantity of stones and pebbles; it is found generally near the slopes of hills, and occupies about 4 per cent. of the cultivated area. The agricultural methods employed are of the simplest description. For the autumn crops, ploughing operations begin with the first fall of sufficient rain (not less than one inch), and the land is ploughed once, twice, or three times, according to the stiffness of the soil. Either a camel or a pair of bullocks is yoked to each plough, but sometimes donkeys or buffaloes are used. More trouble is taken with the cultivation of the spring crops. The land is ploughed from five to seven times, is harrowed and levelled, and more attention is paid to weeding.

In a considerable portion of the State there is practically only one harvest, the *kharif*, or, as it is called here, *sāwnū*; and the principal crops are *bājra*, *jowār*, *moth*, *til*, maize, and cotton. The cultivation of *rabi*, or *unālu* crops, such as wheat, barley, gram, and mustard seed, is confined to the fertile portion enclosed within the branches of the Luni river, to the favoured districts along the eastern frontier, and to such other parts as possess wells. Agricultural statistics are available for only a portion of the *khālsa* area (i.e. land paying revenue direct to the State), measuring nearly 4,320 square miles. Of this area, 1,012 square miles (or more than 23 per cent.) were cultivated in 1903-4; and the following were the areas in square miles under the principal crops: *bājra*, 430; *jowār*, 151; wheat, 81; *til*, 66; barley, 23; and cotton, 11.

Of the total cultivated area above mentioned, 150 square miles (or nearly 15 per cent.) were irrigated in 1903-4: namely, 111 from wells, 12 from canals and tanks, and 27 from other sources. There are, in *khālsa* territory, 22 tanks, the most important of which are the Jaswant Sāgar and Sardār Samand, called after the late and the present chief respectively. Irrigation is mainly from wells, of which there are 7,355 in the *khālsa* area. The water is raised sometimes by means of the Persian wheel, and sometimes in leathern buckets. A masonry well costs from Rs. 300 to Rs. 1,000, and a *kachchā* well, which will last many years, from Rs. 150 to Rs. 300. Shallow wells are dug yearly along the banks of rivers at a cost of Rs. 10 to Rs. 20 each, and the water is lifted by a contrivance called *chānch*, which consists of a horizontal wooden beam balanced on a vertical post with a heavy weight at one end and a small leathern bucket or earthen jar at the other.

The main wealth of the desert land consists of the vast herds of camels, cattle, and sheep which roam over its sandy wastes and thrive admirably in the dry climate. The best riding camels of Mārwar breed come from Sheo in the west and are known as Rāma Thaliā; they are said to cover 80 or even 100 miles in a night. Mallāni, Phalodi, Shergarh, and Sānkra also supply good riding camels, the price of which ranges from Rs. 150 to Rs. 300. The bullocks of Nāgaur are famous throughout India; a good pair will sometimes fetch over Rs. 300, but the average price is Rs. 150. The districts of Sānchor and Mallāni are remarkable for their breed of milch cows and horses. The latter are noted for their hardiness and ease of pace. The principal horse and cattle fairs are held at Parbatsar in September and at Tilwāra (near Bālatra) in March.

Forests cover an area of about 355 square miles, mostly in the east and south-east. They are managed by a department which was organized in 1888. There are three zones of vegetation. On the higher slopes are found *sālar* (*Boswellia thurifera*), *gol* (*Odina Wodier*), *karayia* (*Sterculia urens*), and *golia dhao* (*Anogeissus latifolia*). On the lower hills and slopes the principal trees are the *dhao* (*Anogeissus pendula*) and *sālar*; while hugging the valleys and at the foot of the slopes are *dhūk* (*Butea frondosa*), *ber* (*Zizyphus Jujuba*), *khair* (*Acacia Catechu*), *dhāman* (*Grewia pilosa*), &c. The forests are entirely closed to camels, sheep, and goats, but cattle are admitted except during the rains. Right-holders obtain forest produce free or at reduced rates, and in years of scarcity the forests are thrown open to the public for grazing, grass-cutting, and the collection of fruits, flowers, &c. The forest revenue in 1904-5 was about Rs. 31,000, and the expenditure Rs. 20,000.

The principal mineral found in the State is salt. Its manufacture is

practically a monopoly of the British Government, and is carried on extensively at the SĀMBHAR LAKE, and at DĪDWĀNA and PACHBHADRA. Marble is mostly obtained from MAKRĀNA near the Sāmbhar Lake, but an inferior variety is met with at various points in the Arāvalli Hills, chiefly at Sonāna near Desuri in the south-east. The average yearly out-turn is about 1,000 tons, and the royalty paid to the Darbār ranges from Rs. 16,000 to Rs. 20,000. Sandstone is plentiful in many parts, but varies greatly in texture and in colour. It is quarried in slabs and blocks, large and small, takes a fine polish, and is very suitable for carving and lattice-work. The yearly out-turn is about 6,000 tons. Among minerals of minor importance may be mentioned gypsum, used as cement throughout the country, and found chiefly near Nāgaur; and fuller's earth, existing in beds 5 to 8 feet below the surface in the Phalodi district and near Bārmer, which is largely used as a hair-wash.

The manufactures are not remarkable from a commercial point of view. Weaving is an important branch of the ordinary village industry,

**Trade and
communications.**

but nothing beyond coarse cotton and woollen cloths is attempted. Parts of the Jodhpur and Godwār districts are locally famous for their dyeing and printing of cotton fabrics. Turbans for men and scarves for women, dyed and prepared with much labour, together with embroidered silk knotted thread for wearing on the turban, are peculiar to the State. Other manufactures include brass and iron utensils at Jodhpur and Nāgaur, ivory-work at Pāli and Merta, lacquer-work at Jodhpur, Nāgaur, and Bagri (in the Sojat district), marble toys, &c., at Makrāna, felt rugs in the Mallāni and Merta districts, saddles and bridles at Sojat, and camel-trappings and millstones at Bārmer. The Darbār has its own ice and aerated water factory, and there are five wool and cotton-presses belonging to private individuals.

The chief exports are salt, animals, hides, bones, wool, cotton, oil-seeds, marble, sandstone, and millstones; while the chief imports include wheat, barley, maize, gram, rice, sugar, opium, dry fruits, metals, oil, tobacco, timber, and piece-goods. It is estimated that 80 per cent. of the exports and imports are carried by the railway, and the rest by camels, carts, and donkeys, chiefly the former.

The Rājputāna-Mālwa Railway traverses the south-eastern part of the State, and this section was opened for traffic in 1879-80; its length in Jodhpur territory is about 114 miles, and there are 16 stations. A branch of this railway from Sāmbhar to Kuchāwan Road (in the north-east), opened about the same time, has a length of 15 miles with two stations (excluding Sāmbhar). The State has also a railway of its own, constructed gradually between 1881 and 1900, which forms part of the system known as the Jodhpur-Bikaner Railway. This line runs north-west from Mārwar Junction, on the Rājputāna-Mālwa Railway,

to Lūni junction, and thence (1) to the western border of the State in the direction of Hyderābād in Sind, and (2) north to Jodhpur city. From the latter it runs north-east past Merta Road to Kuchāwan Road, where it again joins the Rājputāna-Mālwa Railway, and from Merta Road it runs north-west to Bikaner and Bhatinda. The section within Jodhpur limits has a length of 455 miles, and the total capital outlay to the end of 1904 was nearly 122 lakhs. The mean percentage of net earnings on capital outlay from the commencement of operations to the end of 1904 has been 7.90, with a minimum of 3.92 and a maximum of 11.40. In 1904 the gross working expenses were 7.3 lakhs and the net receipts 9.6 lakhs, yielding a profit of 7.86 per cent. on the capital outlay.

The total length of metalled roads is about 47 miles and of unmetalled roads 108 miles. All are maintained by the State. The metalled roads are almost entirely in or near the capital, while the principal unmetalled communication is a portion of the old Agra-Ahmadābād road. It was constructed between 1869 and 1875, was originally metalled, and cost nearly 5 lakhs, to which the British Government contributed Rs. 84,000. It runs from near Beāwar to Erinpura, and, having been superseded by the railway, is now maintained merely as a fair-weather communication.

The Darbār adopted Imperial postal unity in 1885-6; and there are now nearly 100 British post offices and five telegraph offices in the State, in addition to the telegraph offices at the numerous railway stations.

The country falls within the area of constant drought, and is liable to frequent famines or years of scarcity. A local proverb tells one to expect 'one lean year in three, one famine year in eight'; and it has proved very true, for since 1792

Famine.

the State has been visited by seventeen famines. Of those prior to 1868, few details are on record, but the year 1812-13 is described as having been a most calamitous one. The crops failed completely; food-stuffs sold at 3 seers for the rupee, and in places could not be purchased at any price; and the mortality among human beings was appalling. The famine of 1868-9 was one of the severest on record. There was a little rain in June and July, 1868, but none subsequently in that year; the grain-crops failed and forage was so scarce in some places that, while wheat was selling at 6, the price of grass was $5\frac{1}{2}$ seers per rupee. The import duty on grain was abolished, and food was distributed at various places by some of the Rānis, Thākurs, and wealthy inhabitants; but the Darbār, beyond placing a lakh of rupees at the disposal of the Public Works department, did nothing. The highest recorded price of wheat was $3\frac{3}{4}$ seers per rupee at Jodhpur city, but even here and at Pāli (the two

principal marts) no grain was to be had for days together. Cholera broke out in 1869 and was followed by a severe type of fever, and it was estimated that from these causes and from starvation the State lost one-third of its population. The mortality among cattle was put at 85 per cent. The next great famine was in 1877-8. The rainfall was only $4\frac{1}{2}$ inches; the *kharif* crops yielded one-fourth and the *rabi* one-fifth of the normal out-turn, and there was a severe grass famine. Large numbers emigrated to Gujarāt and Mālwa with their cattle, and the Darbār arranged to bring the majority back at the public expense, but it was estimated that 20,000 persons and 80,000 head of cattle were lost. This bad season is said to have cost the State about 10 lakhs. The year 1891-2 was one of triple famine (grain, water, and fodder), the distress being most acute in the western districts. About 200,000 persons emigrated with 662,000 cattle, and only 63 per cent. of the former and 58 per cent. of the latter are said to have returned. The Darbār opened numerous relief works and poorhouses; the railway proved a great boon, and there was much private charity. Direct expenditure exceeded $5\frac{1}{2}$ lakhs, while remissions and suspensions of land revenue amounted respectively to about 2.8 and 1.6 lakhs. A succession of bad seasons, commencing from 1895-6, culminated in the terrible famine of 1899-1900. At the capital less than half an inch of rain fell in 1899, chiefly in June, while in two of the western districts the total fall was only one-seventh of an inch. Emigration with cattle began in August, but it was long before the people realized that Mālwa, where salvation is usually to be found, was equally afflicted by drought. Some thousands were brought back by railway to relief works in Jodhpur at the expense of the Darbār, and thousands more toiled back by road, after losing their cattle and selling all their household possessions. Relief works and poorhouses were started on an extensive scale in the autumn of 1899 and kept open till September, 1900. During this period nearly 30 million units were relieved. The total cost to the Darbār exceeded 29 lakhs, and in addition nearly $9\frac{3}{4}$ lakhs of land revenue, or about 90 per cent. of the demand, was remitted. A virulent type of malarial fever which, as in 1869, immediately followed the famine, claimed many victims. There was no fodder-crop worthy of the name throughout the State, and for some time grass was nearly as dear as grain. The mortality among the cattle was estimated at nearly a million and a half. Since then, the State suffered from scarcity in 1902 in the western districts, and again in 1905.

For administrative purposes, Jodhpur is divided into twenty-three districts or *hukūmats* (each under an officer called *hākīm*). In Mallāni,

Administration. however, there is, in consequence of its peculiar tenure, size, and recent restoration to the Darbār, an official termed Superintendent, while the north-eastern districts

have also a Superintendent to dispose of border cases under the extradition agreement entered into with the Jaipur and Bikaner Darbārs.

The State is ordinarily governed by the Mahārājā, assisted by the *Mahakma khās* (a special department consisting of two members) and a consultative Council ; but, during the absence of His Highness, first with the Imperial Cadet Corps and next at Pachmarhī in search of health, the administration has, since 1902, been carried on by the *Mahakma khās* under the general supervision and control of the Resident.

For the guidance of its judiciary the State has its own codes and laws, which follow generally the similar enactments of British India. There are now 41 Darbār courts and 44 *jāgīrdārs*' courts possessing various powers.

The normal revenue of the State is between 55 and 56 lakhs, and the expenditure about 36 lakhs. The chief sources of revenue are : salt, including treaty payments, royalty, &c., about 16 lakhs ; customs, 10 to 11 lakhs ; land (including irrigation), 8 to 9 lakhs ; railway, about 8 lakhs (net) ; and tribute from *jāgīrdārs* and succession fees, &c., about $3\frac{1}{2}$ lakhs. The main items of expenditure are : army (including police), about $7\frac{3}{4}$ lakhs ; civil establishment, 4 lakhs ; public works (ordinary), 3 to 4 lakhs ; palace and household, about 3 lakhs ; and tribute (including payment for the Erinpura Regiment), nearly $2\frac{1}{4}$ lakhs. During the last few years the expenditure has purposely been kept low, in order to extricate the State from its indebtedness : but now that the financial outlook is brighter, an increased expenditure under various items, such as police, public works, and education, may be expected.

The State had formerly its own silver coinage, one issue being known as *Bijai shāhi* and another as *Iktisanda*. The *Iktisanda* rupee was worth from 10 to 12 British annas, while the value of the *Bijai shāhi* was generally much the same as, and sometimes greater than, that of the British rupee. After 1893 exchange fluctuated greatly till, in 1899, $122\frac{3}{4}$ *Bijai shāhi* rupees exchanged for 100 British. The Darbār thereupon resolved to convert its local coins, and the British silver currency has been made the sole legal tender in the State. In 1900 more than 10,000,000 rupees were recoined at the Calcutta mint.

Of the 4,030 villages in the State only 690 are *khālsa*, or under the direct management of the Darbār, and they occupy about one-seventh of the entire area of the State. The rest of the land is held by *jāgīrdārs*, *bhūmiās*, and *ināmdārs*, or by Brāhmans, Chārans, or religious and charitable institutions on the *sāsan* or *dohli* tenure, or in lieu of pay (*pasaita*), or for maintenance (*jivka*), &c., &c. The ordinary *jāgīrdārs* pay a yearly military cess, supposed to be 8 per cent. of the gross rental value (*rekh*) of their estates, and have to supply one horse-

man for every Rs. 1,000 of *rekh*. In the smaller estates they supply one foot-soldier for every Rs. 500, or one camel *sowār* for every Rs. 750. In some cases the *jāgīrdār*, instead of supplying horsemen, &c., makes a cash payment according to a scale fixed by the Darbār. *Jāgīrdārs* have also to pay *hukmnāmu* or fee on succession, namely 75 per cent. of the annual rental value of their estates; but, in the case of a son or grandson succeeding, no cess is levied or service demanded for that year, while if a more distant relative succeeds the service alone is excused. The Thākurs of Mallāni, holding prior to the Rāthor conquest, pay a fixed sum (*faujbal*) yearly and have no further obligations. The *bhūmiās* have to perform certain services, such as protecting their villages, escorting treasure, and guarding officials when on tour, and some pay a quit-rent called *bhūm-bāb*; provided these conditions are satisfied, and they conduct themselves peaceably, their lands are not resumed. *Inām* is a rent-free grant for services rendered; it lapses on the failure of lineal descendants of the original grantee, and is sometimes granted for a single life only. *Sāsam* and *dohli* lands are granted in charity on conditions similar to *inām*, and cannot be sold. *Jirka* is a grant to the younger sons of the chief or of a Thākur. After three generations the holder has to pay cess and succession fee, and supply militia like the ordinary *jāgīrdār*, and on failure of lineal descendants of the original grantee the land reverts to the family of the donor. In the *khālsa* area the proprietary right rests with the Darbār, which deals directly with the *ryots*. The latter may be *bāpidārs*, possessing occupancy rights and paying at favoured rates, or *gair-bāpidārs*, tenants-at-will.

Formerly the land revenue was paid almost entirely in kind. The most prevalent system was that known as *lātā* or *batai*, by which the produce was collected near the village and duly measured or weighed. The share taken by the Darbār varied from one-fifth to one-half in the case of 'dry,' and from one-sixth to one-third in the case of 'wet' crops. This mode still prevails in some of the alienated villages, but in the *khālsa* area a system of cash rents has been in force since 1894. The first and only regular settlement was made between 1894 and 1896 in 566 of the *khālsa* villages (originally for a period of ten years). It is on the *ryotwāri* system. The village area is divided into (1) secure, i.e. irrigated from wells or tanks, where the yearly out-turn varies but slightly, and remissions of revenue are necessary only in years of dire famine; and (2) insecure, or solely dependent on the rainfall. In the former portion the assessment is fixed, and in the latter it fluctuates in proportion to the out-turn of the year. The basis of the assessment was the old *batai* collections together with certain cesses, and the gross yield was calculated from the results of crop experiments made at the time, supplemented by local inquiries. The rates per acre of

wet' land range from Rs. 2-5-6 to Rs. 10 (average, Rs. 2-10-6), while those for 'dry' land range from $1\frac{1}{4}$ to $12\frac{1}{2}$ annas (average, $4\frac{1}{2}$ annas).

The State maintains two regiments of Imperial Service Lancers (normal strength 605 per regiment), and a local force consisting of about 600 cavalry (including camel *sowārs*) and 2,400 infantry. The artillery numbers 254 of all ranks, and there are 121 guns of various kinds, of which 75 (namely, 45 field and 30 fort) are said to be serviceable. In addition, the irregular militia supplied by the *jāgīrdārs* mustered 2,019 in 1904-5 : namely, 1,785 mounted men and 234 infantry. The Imperial Service regiments were raised between 1889 and 1893, and are called the Sardār Risāla, after the present chief. Their cost in 1904-5, when they were considerably below strength, was about 3.2 lakhs. The first regiment formed part of the reserve brigade of the Tirāh Field Force in 1897-8, and two detachments did well on convoy duty ; the same regiment was on active service in China in 1900-1, was largely represented in the expedition to the Laushān hill and Chinausai, and was permitted to bear on its colours and appointments the honorary distinction 'China, 1900.' There are no cantonments in the State, but the Darbār contributes a sum of 1.2 lakhs yearly towards the cost of the 43rd (Erinpura) Regiment (*see* ERINPURA).

Police duties have hitherto been performed by the local force above mentioned ; but since August, 1905, a regular police force under an Inspector-General, numbering about 1,500 of all ranks and estimated to cost about $2\frac{1}{2}$ lakhs a year, has been formed. In addition, a small force is employed on the Jodhpur-Bikaner Railway.

Besides the Central jail at the capital, there are subsidiary jails at the head-quarters of the several districts, in which persons sentenced to three months' imprisonment or less are confined, and lock-ups for under-trial prisoners at each *thāna* or police-station.

In the literacy of its population Jodhpur stands second among the twenty States and chiefships of Rājputana, with 5.4 per cent. (10 males and 0.3 females) able to read and write. Excluding numerous indigenous schools, such as Hindu *posāls* and Musalmān *maktabs*, 4 private institutions maintained by certain castes but aided by the Darbār, and a Mission girls' school, there were, in 1905, 33 educational institutions kept up by the State, one of which was for girls. The number on the rolls was nearly 2,300 (more than 50 per cent. being Mahājans and Brāhmans, and 12 per cent. Musalmāns), and the daily average attendance during 1904-5 was about 1,740. The most notable institutions are at the capital : namely, the Arts college, the high school, and the Sanskrit school. Save at the small railway school at Merta Road, where a monthly fee of 2 or 4 annas per pupil is taken, education is free throughout the State, and the expenditure exceeds Rs. 44,000 a year.

There are 24 hospitals and 8 dispensaries in the State, which have accommodation for 342 in-patients. In 1904 more than 178,000 cases, including nearly 3,000 in-patients, were treated, and about 7,700 operations were performed. The State expenditure on medical institutions, including allowances to the Residency Surgeon, is approximately Rs. 70,000 yearly.

Vaccination was started about 1866, is compulsory throughout the State, and not unpopular. A staff of 2 superintendents and 22 vaccinators is maintained, and in 1904-5 they successfully vaccinated 61,000 persons, or nearly 32 per 1,000 of the population.

[C. K. M. Walter, *Gazetteer of Mārṡār and Mallāni* (1887); *Rājputāna Gazetteer*, vol. ii (1879, under revision); Sukhdeo Parshad, *The Rāthors, their Origin and Growth* (Allahābād, 1896); *Report on Famine Relief Operations in Mārṡār during 1896-7 and during 1899-1900*; *Report on the Census of Mārṡār in 1891*, vols. i and ii (1891-4); A. Adams, *The Western Rājputāna States* (1899); also *Administration Reports of the Mārṡār State* (annually from 1884-5).]

Jodhpur City.—Capital of the State of the same name in Rājputāna, situated in 26° 18' N. and 73° 1' E., about 380 miles by rail from Delhi, 590 from Bombay, and 1,330 from Calcutta. The population of the city (including the suburbs) was: (1881) 63,329, (1891) 80,405, and (1901) 79,109. In the two years last mentioned between 76 and 77 per cent. of the inhabitants lived within the city walls. In 1901 Hindus numbered 58,292, or more than 73 per cent. of the total; Musalmāns, 15,811, or 20 per cent.; and Jains, 4,571, or 5 per cent.

Jodhpur takes its name from Rao Jodha, who founded it in 1459. The old wall with four gates built by him is now included within the limits, and is situated in the south-west of the modern city, which lies on sloping ground in the form of a horseshoe around the base of the rock on which stands the fort. It is encircled by a strong massive wall, built in the first half of the eighteenth century, which is 24,600 feet long, 3 to 9 feet thick, and 15 to 30 feet high, and has six gates studded with sharp iron spikes to protect them against elephant ramming. Of these gates, five are called after the towns which they face, namely Jālor, Merta, Nāgaur, Siwāna, and Sojat, while the sixth is named Chānd Pol because it faces the direction in which the new moon (*chānd*) is visible. The walls and towers near the Nāgaur Gate show marks of cannon-balls left by the armies of Jaipur and Bikaner which, with the aid of the great freebooter, Amīr Khān, marched on Jodhpur about 1807 to support the pretender Dhonkal Singh against Mahārājā Mān Singh. Eventually Amīr Khān changed over to the side of the latter, and the insurgents were forced to retire with considerable loss and ignominy. The fort, which is the finest in Rājputāna, commands the city and, standing in great magnificence on an isolated rock about 400 feet above the sur-

rounding plain, attracts the eye from afar. Its wall, 20 to 120 feet in height and 12 to 70 feet thick, encloses an oblong space about 500 yards in length by 250 in breadth at the widest part. Two main entrances, the Jai Pol at the north-east corner and the Fateh Pol in the south-west, lead up from the city, and between them are several other gates and inner walls erected for purposes of defence. The principal buildings in the fort are a series of apartments forming the palace, the most noteworthy being the Moti Mahal, built by Rājā Sūr Singh in the beginning of the seventeenth century, the Fateh Mahal, built by Mahārājā Ajit Singh about 100 years later to commemorate the retirement of the Mughal army from his capital, and the room now used as an armoury. These buildings are decorated with beautifully carved panels and pierced screens of red stone. The city contains many handsome buildings, including ten old palaces, some town residences of the Thākurs, and eleven fine temples, the most beautiful architecturally being the Kunj Bihārī-kā-mandar, built in the latter half of the eighteenth century.

Jodhpur is a trading centre, but its industries are unimportant, consisting of lacquer-work, dyeing of cotton cloths, and the manufacture of brass and iron utensils. The main streets are paved; and a light tramway of 2 feet gauge, laid down in 1896 between the railway station and the city, the cars being drawn by bullocks, has proved of great convenience to the public, and has considerably reduced the cost of carriage of grain and other commodities. A municipal committee (established in 1884) attends to the sanitation of the city, and settles disputes relating to rights of easement, &c., the annual expenditure of about Rs. 20,000 being borne solely by the Darbār. A tramway line, worked by buffaloes, runs round the city, passing all but one of the public latrines. Twice a day the loaded wagons are collected and formed into trains outside the Sojatia Gate, whence they are hauled by steam-power a distance of about 5 miles into the open country, where the filth is trenched and the refuse burnt. This steam conservancy tramway is the first of its kind in Rājputāna. The total length of the line, including the section worked by buffaloes, and an extension up to and round the Mahārājā's stables, now exceeds 13 miles. It was completed between 1897 and 1899 at a cost of more than 1½ lakhs, and the working expenses average about Rs. 7,000 a year. Within the city are three hospitals and a couple of dispensaries. Of the hospitals, one is solely for females and another is maintained by the United Free Church of Scotland Mission. In the suburbs there are hospitals attached to the jail and the Imperial Service cavalry regiments, and a couple of dispensaries, one of which is close to the Residency and is kept up by the British Government, while the other is for railway employés. The city possesses an Arts college, a high school with lower secondary and

primary sections, and a boarding-house for fifty Rājput boys; also two primary schools, a girls' school, and three special institutions where Sanskrit, telegraphy, and surveying are taught. These are all maintained by the Darbār and are for the most part in the suburbs; there are, in addition, numerous private schools in the city. The principal buildings in the suburbs are the late Mahārājā's palace at Rai-kā-bāgh, the fine new palace at Ratanāda which is lighted by electricity, the Imperial Service cavalry lines, the handsome public offices, the Residency and other official buildings, and the jail with accommodation for 862 prisoners.

Jodiya.—Town and chief port of Navānagar State, Kāthiāwār, Bombay, situated in $22^{\circ} 40' N.$ and $70^{\circ} 26' E.$, about 24 miles north-east of Navānagar town, 46 miles north-west of Rājkot, and 40 miles west of Morvi. Population (1901), 7,321. The port was formerly a fishing village on the south-eastern shores of the Gulf of Cutch. The wharf is about a mile and a half distant from the town, with which it is connected by a good made road. A custom-house and a press for cotton and wool bales are at the wharf. The water off this part of the coast is too shallow for ships of any considerable burden. According to a local legend, the Gulf from Jodiya to the opposite coast of Cutch could be crossed by a footpath at low water 200 years ago. The north-west bastion of the fort, 80 feet above the sea, the palace or *darhār* house, 300 yards south-east of the bastion, and a grove of trees, a mile to the south and outside the town, are high and conspicuous marks when nearing the port from seaward. The town is surrounded by a wall with towers and a small interior fort. It has vernacular boys' and girls' schools and a dispensary.

Jogeshvari.—Cave in the Salsette *tāluka* of Thāna District, Bombay, situated in $19^{\circ} 13' N.$ and $72^{\circ} 59' E.$, $2\frac{1}{2}$ miles south-east of Goregaon station, on the Bombay, Baroda, and Central India Railway. It is the third largest of the great Brāhmanical caves of India, the others being Sitā's Bath at Ellora and the Great Cave at Elephanta. Its length is 240 and breadth 200 feet. This cave-temple, which dates from the seventh century, contains rock-cut passages, an immense central hall supported by pillars, porticoes, and subsidiary courts.

[Du Perron (1760), *Zend Avesta*, vol. i, pp. ccclxxxviii-cccxc; Hunter (1784), *Archaeologia*, vol. vii, pp. 295-9; Salt (1806), *Transactions of the Bombay Literary Society*, vol. i, pp. 44-7; *Bombay Gazetteer*, vol. xiv, pp. 110-2.]

Jogighopā.—Village in Goālpāra District, Eastern Bengal and Assam, situated in $26^{\circ} 14' N.$ and $90^{\circ} 34' E.$, on the north bank of the Brahmaputra at the point where it is joined by the Manās. Population (1901), 734. A steam ferry plies between Jogighopā and Goālpāra, and the telegraph wires are carried beneath the river at this point to the south bank. Prior to the annexation of Assam, Jogighopā was

a frontier outpost of Bengal, and a number of Europeans resided here, who forcibly obtained a monopoly of the Bengal trade and were thus enabled to do a lucrative business with the natives who enjoyed similar privileges in Assam. Four large tombs remain as evidence of their occupation, but the inscriptions have disappeared. Jogighopā derives its name from some caves cut out of the rocks near the river bank, which at one time used to be occupied by ascetics. The place is now of little importance, but contains a *tahsil* belonging to the Bijni estate.

Johi.—*Tāluka* of Lārkāna District, Sind, Bombay, lying between $26^{\circ} 7'$ and 27° N. and $67^{\circ} 11'$ and $67^{\circ} 47'$ E., with an area of 760 square miles. The population in 1901 was 51,218, compared with 51,919 in 1891. The *tāluka* contains 87 villages, of which Johi is the head-quarters. The density, 67 persons per square mile, is much below the District average. In 1903-4 the land revenue and cesses amounted to 1.4 lakhs. About a quarter of the *tāluka* is irrigated by the Western Nāra system and the Manchhar Lake. The remainder depends upon the rainfall, and the harvest is therefore precarious. The soil has great capabilities, and with seasonable rain three crops of *jowār* are obtained from one sowing. Migration to the irrigated tracts accompanies years of scanty rainfall. The Kīrthar Hills bound the *tāluka* on the west.

Jollārpēt.—Village and railway station in Salem District, Madras. See JALĀRPET.

Joma-male.—Hill in Coorg. See SOMA-MALE.

Jorā.—Head-quarters of the Tonwarghār district of Gwalior State, Central India, situated in $26^{\circ} 20'$ N. and $77^{\circ} 49'$ E., on the Gwalior Light Railway. Population (1901), 2,551. The place is usually called Jorā-Alāpur, to distinguish it from other places of the same name. Alāpur is a village lying a mile to the north. Jorā contains the ruins of an old fort built by the Karauli chiefs, the usual district offices, a school, a dispensary, a State post office, a *sarai*, a public works inspection bungalow, and a police station.

Jorhāt Subdivision.—Central subdivision of Sibsāgar District, Eastern Bengal and Assam, lying between $26^{\circ} 22'$ and $27^{\circ} 11'$ N. and $93^{\circ} 57'$ and $94^{\circ} 36'$ E., with an area of 819 square miles. About two-fifths of the subdivision lies north of the main channel of the Brahmaputra, and is known as the MĀJULI island, a comparatively sparsely peopled tract, liable to damage from flood. The part south of the river is one of the most populous portions of the Assam Valley, and in places has a density exceeding 600 persons per square mile. The swamps fringing the Brahmaputra are inundated in the rains; but farther inland stretches a broad plain, the lower part of which is cultivated with rice, while tea and sugar-cane are grown on the higher land.

The population in 1901 was 219,137, about one-fourth of which was enumerated on tea gardens, as compared with 181,152 in 1891. The subdivision contains one town, JORHĀT (population, 2,899), the headquarters; and 651 villages. The annual rainfall at Jorhāt town averages 80 inches, but on the eastern border of the subdivision it is a little higher. In 1904 there were altogether 56 tea gardens with 30,851 acres under plant, which gave employment to 62 Europeans and 36,849 natives. The subdivision is particularly well supplied with means of communication, as the Assam-Bengal Railway runs along the south-east, and at Titābar and Mariāni meets a light state railway, which passes through Jorhāt town to the Brahmaputra. The assessment for land revenue and local rates in 1903-4 was Rs. 5,79,000.

Jorhāt Town.—Head-quarters of the subdivision of the same name in Sibsāgar District, Eastern Bengal and Assam, situated in $26^{\circ} 45' N.$ and $94^{\circ} 13' E.$, on the left bank of the Disai river. The town had a population in 1901 of 2,899, and is administered as a Union under (Bengal) Act V of 1876, the expenditure in 1903-4 amounting to nearly Rs. 8,000. Jorhāt was the capital of the Ahom Rājās after Gaurināth Singh had been driven from Rangpur near Sibsāgar at the end of the eighteenth century. It contains a fine tank of excellent water, on the banks of which the subdivisional officer's residence and office have been located, and the remains of considerable earthworks. There is a flourishing bazar, the largest shops in which are owned by Mārṇārī merchants, who do a large business with the tea gardens in the neighbourhood. The principal articles of import are cotton piece-goods, grain, salt and oil, the chief exports being mustard seed, cane, and hides. Furniture and haberdashery are sold by Muhammadan traders from Bengal. A colony of Telis has been formed in the town, who express mustard oil in the ordinary bullock-mills of Upper India; and Jorhāt is the chief centre for the manufacture of Assamese jewellery, which usually consists of lac covered with gold and enamel and set with cheap stones. The public buildings include a small jail, a hospital with twenty-four beds, and two high schools which in 1903-4 had an average attendance of 452 boys. A daily market for the sale of native produce is numerously attended; and, owing to the density of the population and the presence of a large number of prosperous gardens in the neighbourhood, Jorhāt has become the most important centre of trade in the District. A light state railway passes through the town, connecting it with the Brahmaputra at Kakilāmukh and with the Assam-Bengal Railway at Mariāni and Titābar. The transfer of the head-quarters of the District from Sibsāgar to Jorhāt has recently been sanctioned.

Joshimath.—Village in Garhwāl District, United Provinces, situated in $30^{\circ} 33' N.$ and $79^{\circ} 35' E.$, at an elevation of 6,107 feet above sea-

level and about 1,500 feet above the confluence of the Dhauli and Bishangangā, the combined stream being known as the Alaknandā. Population (1900), 468 in summer and a little larger in winter. It is chiefly remarkable as the winter head-quarters of the *rūwal* or chief priest of the temple of BADRĪNĀTH, who retires here after the snows have rendered the higher shrine inaccessible. The village contains several ancient temples, some of which have been much damaged by earthquakes. A police station is opened here during the pilgrim season.

Jotāna.—Petty State in MAHĪ KĀNTHA, Bombay.

Jotiba's Hill (also called Vādi Ratnāgiri).—Hill in the State of Kolhāpur, Bombay, situated in 16° 48' N. and 74° 13' E., about 9 miles north-west of Kolhāpur town. It rises about 1,000 feet from the plain in a truncated cone, and, though disconnected, forms part of the Panhāla spur which stretches from the crest of the Western Ghāts to the Kistna. On the wooded hill-top is a small village with 1,400 inhabitants, mostly priests of Jotiba. From very ancient times this hill has been considered especially sacred. In the middle of the village is a group of temples, three of which are dedicated to Jotiba, under the names of Kedārling, Kedāreshwar, and Rāmling. According to a local legend, Ambā Bai of Kolhāpur, being disturbed by demons, went to Kedārñāth in the Himālaya hills, practised severe penance, and prayed him to destroy the demons. In answer to her prayers Kedāreshwar came to Jotiba's Hill, bringing with him and setting up the present Kedār *lingam*. The original temple is said to have been built by one Nāvji Saya. In its place Rānoji Sindhia built the present temple in 1730. The second temple of Kedāreshwar was built by Daulat Rao Sindhia in 1808. The third temple of Rāmling, including the dome, was built about 1780 by one Mālji Nilam Panhālkar. In a small domed shrine in front of the temple of Kedāreshwar are two sacred bulls of black stone. Close to these temples is a shrine sacred to Chopdai, which was built by Priti Rao Himmat Bahādur in 1760. A few yards outside of the village stands a temple of Yamai, built by Rānoji Sindhia. In front of this are two sacred cisterns, one of which is said to have been built by Jijābai Sāhib about 1743; the other, called Jāmadagnya *tirth*, was built by Rānoji Sindhia. Most of the temples on Jotiba's Hill are made of a fine blue basalt which is found on the hills. In many parts the style of architecture, which is strictly Hindu, is highly ornamented, several of the sculptured figures being covered with brass and silver plates. The chief object of worship is Jotiba, who, though called the son of the sage Pangand, is believed to have been Pangand himself, reincarnated to help the rulers of the Deccan in their fights with the demons. According to tradition, Jotiba's destruction of one of the demons named Ratnāsūr gave the

place the name of Ratnāgiri. In honour of the victory over the demon, on the full moon of Chaitra (March–April) a yearly fair is held attended by 40,000 or 50,000 people, some of whom come from great distances. Besides this great fair, small fairs are held every Sunday and full moon day and on the 6th of the bright half of Shrāvan (August). On these days the image is carried round the temple in a litter with great pomp.

Jounpore.—District, *tahsīl*, and city, United Provinces. See JAUNPUR.

Jowai Subdivision.—Subdivision of the Khāsi and Jaintiā Hills District, Eastern Bengal and Assam, lying between $24^{\circ} 58'$ and $26^{\circ} 3' N.$ and $91^{\circ} 59'$ and $92^{\circ} 51' E.$, with an area of 2,086 square miles. Jowai originally formed part of the territory of the Jaintiā Rājā, and was acquired from him by the British in 1835. The population in 1901 was 67,921, as compared with 64,521 in 1891, giving a density of 33 persons per square mile. Most of the inhabitants are Syntengs, a tribe of Tibeto-Burman origin akin to the Khāsis. The subdivision contains 640 villages, and is in charge of a European Magistrate, whose head-quarters are at Jowai, a prosperous village with some local trade. The rainfall is recorded only at Jowai itself, where there is an average annual fall of 237 inches; but on the southern face of the hills the precipitation is probably even greater.

Jowai Village.—Headquarters of the Jowai subdivision of the Khāsi and Jaintiā Hills District, Eastern Bengal and Assam, situated in $25^{\circ} 26' N.$ and $92^{\circ} 12' E.$, at a height of 4,422 feet above the sea. Population (1901), 3,511. Jowai is the head-quarters of the sub-divisional officer, who is almost invariably a European, and it possesses a considerable trade. The chief exports are raw cotton and rubber: the imports are rice, dried fish, cotton goods, and salt. The average annual rainfall is 237 inches.

Jūba.—Deserted fortress in the Surgujā State, Central Provinces, situated in $23^{\circ} 43' N.$ and $83^{\circ} 26' E.$, about 2 miles south-east of Mānpurā village. The fort stands on the rocky shoulder of a hill, and commands a deep gorge overgrown with jungle. Hidden among the trees are the remains of carved temples, almost covered with accumulations of vegetable mould.

Jubbāl (*Jubal*).—One of the Simla Hill States, Punjab, lying between $30^{\circ} 46'$ and $31^{\circ} 8' N.$ and $77^{\circ} 27'$ and $77^{\circ} 50' E.$, with an area of 288 square miles. Population (1901), 21,172. Jubbāl was originally tributary to Sirmūr, but after the Gurkha War it became independent. The Rānā misgoverned the State, and in 1832 abdicated in favour of the British Government, but soon, however, repented, and in 1840 the State was restored to him. His grandson, Padam Chand, ruled the State with ability from 1877 till his death in 1898, and was succeeded by Gyān Chand, the present Rānā, who is a minor. The State is now

under the management of a British official. The ruling family is by caste Rāthor Rājput. The State contains 84 villages, including DEORHA, its capital, and has an estimated revenue of nearly Rs. 1,52,000. The chief products are grain, tobacco, and opium.

Jubbulpore Division (*Jabalpur*).—Northern Division of the Central Provinces, lying between $21^{\circ} 36'$ and $24^{\circ} 27'$ N. and $78^{\circ} 4'$ and $81^{\circ} 45'$ E., with an area of 18,950 square miles. The head-quarters of the Commissioner are at JUBBULPORE CITY. The Division contains five Districts, as shown below :—

District.	Area in square miles.*	Population, 1901.	Land revenue and cesses, 1903-4, in thousands of rupees.
Saugor	3,962	469,479	5,52
Damoh	2,816	285,326	3,89
Jubbulpore	3,912	680,585	9,67
Mandlā	5,054	318,400	1,97
Seonī	3,206	327,709	3,13
Total	18,950	2,081,499	24,18

* The District figures of area and population have been adjusted to allow for some small transfers of territory since the Census of 1901.

Of these, Saugor and Damoh and the Murwāra *tahsīl* of Jubbulpore lie on the Vindhyan plateau to the north; the southern part of Jubbulpore is situated at the head of the narrow valley through which the Narbadā river flows between the Vindhyan and Sātpurā ranges; while Seonī and Mandlā form part of the Sātpurā plateau to the south. The Division therefore consists generally of hilly country, lying at a considerable elevation and enjoying a comparatively temperate climate. In 1881 the population of the Division was 2,201,573, which increased in 1891 to 2,375,610 or by 8 per cent. The increase was considerably below the average for the Province, the decade having been an unhealthy one, especially in Saugor and Damoh. In 1901 the population was 2,081,916, a decrease of 12 per cent. on the figures of 1891. Since the Census a small transfer of territory has taken place, and the adjusted population is 2,081,499. All Districts of the Division suffered severely from famine during the decade. In 1901 Hindus formed 74 per cent. of the total and Animists 20 per cent. There were 89,731 Musalmāns, 29,918 Jains, and 5,878 Christians, of whom 2,706 were Europeans and Eurasians. The density of population is 110 persons per square mile, as compared with 112 for all British Districts of the Province. The Division contains 11 towns and 8,561 inhabited villages; but JUBBULPORE CITY (90,316) and SAUGOR (42,330) are the only towns with a population of more than 20,000. Thirteen miles from Jubbulpore, at a gorge overhanging the Narbadā river, are the well-known MARBLE ROCKS.

Jubbulpore District.—District in the Jubbulpore Division of the Central Provinces, lying between $22^{\circ} 49'$ and $24^{\circ} 8'$ N. and $79^{\circ} 21'$ and $80^{\circ} 58'$ E., at the head of what may be called the Narbadā Valley proper, with an area of 3,912 square miles. On the north and east it is bounded by the States of Maihar, Pannā, and Rewah; on the west by Damoh District; and on the south by Narsinghpur, Seonī, and Mandlā. The Narbadā, entering the District from the Mandlā highlands on the south-east, winds circuitously through its southern portion,

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passing within 6 miles of the city of Jubbulpore, and finally leaves it on the south-western border. To the north of the Narbadā extends an open plain, bounded on the north-west by offshoots of the Vindhyan, and on the south-west by those of the Sātpurā range. Farther to the north-west the surface becomes more uneven, small tracts of level alternating with broken and hilly country. The south-western plain, called the Haveli, is one of the richest and most fertile areas in the Province. It consists of a mass of embanked wheat-fields, and occupies the valley of the Hiran and Narbadā rivers, extending from the south-western border of the District as far north as the town of Sihorā, and from the Hiran river flowing close beneath the Vindhyan Hills to the railway line, including also a tract round Sarohi beyond the line. On the western bank of the Hiran, the Bhānrer range of the Vindhyan system forms the boundary between Jubbulpore and Damoh. To the south-east of the Haveli lies a large tract of poor and hilly country, forming the northern foot-hills of the Sātpurā range. North of the Haveli the Vindhyan and the Sātpurā systems approach each other more closely, until they finally almost meet in the Murwāra *tahsīl*. The Kaimur ridge of the Vindhyas commencing at Katangī runs through the west of the Sihorā *tahsīl*, and approaches Murwāra, leaving to the north-west a stretch of hill country with one or two small plateaux. On the east, the Sātpurās run down to the railway between Sihorā and Sleemanābād, and from them a ridge extends northwards till it meets the Vindhyan system at Bijerāghogharh in the extreme north of the District. Between these ranges lie stretches of comparatively open country, less fertile than the Haveli. Lying at the junction of the Vindhyan and Sātpurā ranges, Jubbulpore forms part of the great central watershed of India. The southern part of the District is drained by the Narbadā and its tributaries, the Hiran and Gaur. In the north the Mahānadi, after forming for some distance the boundary between Jubbulpore and Rewah, crosses the Murwāra *tahsīl* and passes on to join the Son, a tributary of the Ganges. The Katnī river flowing by Katnī-Murwāra is an affluent of the Mahānadi. The Kēn river rises in the Kaimur range on the west, but flows for only a short distance within the District.

The valley of the Narbadā from Jubbulpore to the western boundary

is an alluvial flat, chiefly composed of a stiff red or brown clay with numerous intercalated bands of sand and gravel. *Kankar* abounds throughout the deposit, and pisolitic iron granules are of frequent occurrence. The southern and eastern portions of the District are generally covered by the Deccan trap. In the north is a continuous exposure of sub-metamorphic strata, consisting of fine earthy slate, quartzite, limestone, ribboned jasper passing locally into bluish quartzite, micaceous hematite and other rocks. In these rocks or in association with them the manganese, lead, and copper ores, and the richest iron ores of the District occur. The rocks round Jubbulpore are gneiss.

The plain country is well wooded with mango, tamarind, *ber* (*Zizyphus jujuba*), guava, *mahuā* (*Bassia latifolia*), and other fruit-bearing trees. Among the ornamental or quasi-religious trees are the banyan, *pāpāl*, and *kachnār* (*Bauhinia variegata*). The hills are covered with forest, which formerly suffered great loss from the annual clearing of patches by the hill tribes and from grass fires. The principal timber trees are teak, *sāj* (*Terminalia tomentosa*), *haldu* (*Adina cordifolia*), *tendū* or ebony (*Diospyros tomentosa*), and bamboos. Peaches and pineapples and excellent potatoes and other vegetables are also grown.

The usual wild animals and birds are found in Jubbulpore, and there is a considerable variety of game. Tigers and leopards are the common carnivora; and the deer and antelope tribe includes *sāmbār*, spotted deer, 'black buck,' and the *chinkāra* or Indian gazelle.

The annual rainfall averages 59 inches, and is usually copious, that of Murwāra in the north being somewhat lighter and also apparently more variable. The climate is pleasant and salubrious. The average maximum temperature in May does not exceed 106°, and in the cold season light frosts are not infrequent.

The village of Tewar, lying a few miles from Jubbulpore, is the site of the old city of Tripura, or Karanbel, the capital of the Kalachuri dynasty. The information available about the Kala-

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churi or Chedi dynasty has been pieced together from a number of inscriptions found in Jubbulpore District, in Chhattisgarh, and in Benares¹. They belonged to the Haihaya Rājputs, and were a branch of the Ratanpur family who governed Chhattisgarh. Their rise to power possibly dates from shortly after the commencement of the Christian era, and they had an era of their own called the Chedi Samvat, which commenced in A.D. 249. For the first five or six centuries of their rule there remain only a few isolated facts; but for a period of three hundred years, from the ninth to the twelfth century, a complete genealogy has been drawn up. We have the names of eighteen kings, and occasional mention of their marriages or wars with

¹ *Records of the Archaeological Survey*, vol. ix, p. 78 seq.

the surrounding principalities—the Rāthors of Kanauj, the Chandels of Mahobā, and the Paramāras of Mālwa. Their territory comprised the upper valley of the Narbadā. From the twelfth century nothing more is known of them, and the dynasty probably came to an end, eclipsed by the rising power of Rewah or Baghelkhand. At a subsequent period, probably about the fifteenth century, Jubbulpore was included in the territories of the Gond Garhā-Mandlā dynasty, and Garhā was for some time their capital. On the subversion of the Gond by the Marāthās in 1781, Jubbulpore formed part of the Saugor territories of the Peshwā. It was transferred to the Bhonsla Rājās of Nāgpur in 1798, and became British territory in 1818.

In 1857 Jubbulpore was garrisoned by the 52nd Native Infantry and was the head-quarters of Major Erskine, the Commissioner of the Saugor and Nerbudda Territories, then attached to the North-Western Provinces. In June, 1857, the demeanour of the native troops became suspicious, and the Europeans in the station were collected in the Residency, which was made defensible. The sepoy, however, remained quiet; and in August a movable column of Madras troops arrived from Kamptee, and were sent forward to restore order in the interior of Jubbulpore and Damoh Districts, which were in a very disturbed condition and were being raided by mutineers from Saugor. On September 18 the deposed Gond Rājā of Garhā-Mandlā and his son, who had been detected in a conspiracy against the British, were blown away from guns, and on that night the whole of the 52nd regiment quietly rose and left the station. The Madras troops who were then at Damoh were recalled, and on arriving at Katangi found the rebels on the farther bank of the Hiran river. The passage was forced and the enemy put to flight, and no serious disturbance occurred subsequently. The northern *pargana* of Bijerāghogharh was formerly a Native State. The chief was deposed for participation in the Mutiny, and his territory was incorporated in Jubbulpore District in 1865.

The relics of the different races and religions which at one time or another have been dominant in Jubbulpore are fairly numerous, but are now for the most part in ruins. Remains of numerous old Hindu temples and fragments of carved stone are found in a group of villages on the banks of the Ken river, north-west of Murwāra. These are Rithi, Chhoti-Deori, Simrā, Purenī, and Nāndchānd. The ruins at Bargaon belong to the Jains. Bilehri, a little to the south, was once a place of some note; but the only remains now existing are a great tank called Lachhman Sāgar, a smaller tank, and two temples. In the centre of the District the villages of Bahuriband, Rūpnāth, and Tigwān contain another group of remains. Bahuriband ('many embankments') is believed to have once been the site of a large city, con-

jecturally identified by Cunningham with the Tholobana of Ptolemy. The only piece of antiquity now remaining is a large naked Jain statue, with an inscription of the Kalachuri dynasty of Tewar. A small hill at Tigwān, two miles from Bahuriband, is covered with blocks of cut stone, the ruins of many temples which have been destroyed by the railway contractors. At Rūpnāth there is a famous *lingam* of Siva, which is placed in a cleft of the rock, where a stream pours over the Kaimur range; but the place is more interesting as being the site of one of the rock-inscriptions of Asoka. Separate mention is made of Garhā, now included in the city of JUBBULPORE.

The population of the District at the last three enumerations was as follows: (1881) 687,233, (1891) 748,146, and (1901) 680,585. The increase of 9 per cent. between 1881 and 1891 was smaller than that for the Province as a whole.

Population.

During the last decade the loss of population has been 9 per cent., being least in the Murwāra *tahsil*. The District contains three towns, JUBBULPORE CITY, SIHORĀ, and MURWĀRĀ; and 2,298 inhabited villages. The principal statistics of population in 1901 are shown below:—

<i>Tahsil.</i>	Area in square miles.	Number of		Population	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Jubbulpore	1,519	1	1,076	332,488	219	— 8.1	21,097
Sihorā	1,197	1	706	186,424	156	— 12.5	7,974
Murwāra	1,196	1	516	161,673	135	— 7.2	6,745
District total	3,912	3	2,298	680,585	174	— 9.0	35,816

The figures for religion show that $87\frac{1}{2}$ per cent. of the people are Hindus, $5\frac{1}{2}$ per cent. Animists, and $5\frac{1}{2}$ per cent. Muhammadans, while there are 6,177 Jains. Nearly the whole population is returned as speaking the Baghelī dialect of Eastern Hindī; this form of the language closely resembles the dialects of Oudh and Chhattisgarh, and is found elsewhere in the Central Provinces only in Mandlā. About 5,000 persons are returned as speaking Gondī.

The principal landholding castes are Brāhmans (64,000), Baniās (17,000), Gonds (79,000), Kurmīs (35,000), Rājputs (17,000), and Lodhīs (41,000). The Brāhmans hold no very important estates, but numerous small ones, not infrequently assigned to them partly or wholly revenue-free from the time of the Gond rulers. Brāhmans form 9 per cent. of the total population, a fact which is partly to be attributed to the number of sacred places on the Narbadā. Kurmīs and Lodhīs are the principal cultivating castes; the Lodhīs have several fine

estates, frequently held on quit-rent tenure and locally called *jāgīrs*. The Gonds number nearly 79,000, or $11\frac{1}{2}$ per cent. of the population. The Bhariā Bhumīās (22,000) are another primitive tribe. The Bhumīā proper is the village priest, charged with the worship of the local deities, and generally receiving a free grant of land from the proprietor. The Bhariās, on the other hand, have strong thieving propensities, and are sometimes spoken of as a criminal tribe. The identity of the two is uncertain. The Kols, who number about 46,000, or nearly 7 per cent. of the population, live more in the open country than the Gonds, and are employed as farm-servants or on earth-work. Agriculture supports about 62 per cent. of the population.

Christians number 3,688, of whom 2,044 are Europeans and Eurasians. The Church Missionary Society and the Zanāna Mission of the Church of England, and others belonging to the Wesleyan, American Methodist, and Roman Catholic Churches, are working in the District; all of these have their head-quarters at Jubbulpore city.

The best soil of the District is the black alluvial clay (*kābar*) or loam (*mund*) of the upper Narbadā valley. The former covers nearly 12 and

the latter 26 per cent. of the cultivated area. Sandy

Agriculture. rice land formed from crystalline rock covers about 10 per cent., and mixed black and sandy soil, which sometimes produces wheat, nearly 12 per cent. Most of the remaining land is either very shallow blackish soil, or the red and stony land of the hills. About 25 per cent. of the occupied area is generally uncultivated, long resting fallows being required for the shallow stony soil on which light rice and the minor millets are grown. The distinctive feature of agriculture in Jubbulpore is the practice of growing wheat in large embanked fields, in which water is held up during the monsoon season, and run off a fortnight or so before the grain is sown. The advantages of this system are that there is little or no growth of weeds, most of the labour of preparing the land for sowing is saved, and the cultivator is independent of the variable autumn rain, as the fields do not dry up.

With the exception of 1,094 acres settled on the *ryotwāri* system, all land is held on the ordinary *mālguzāri* tenure. The following table gives the principal statistics of cultivation in 1903-4, areas being in square miles:—

<i>Tahsil.</i>	Total.	Cultivated.	Irrigated.	Cultivable waste.	Forests.
Jubbulpore . .	1,519	799	2	412	113
Sihorā . .	1,197	563	2	344	96
Murwāra . .	1,196	607	1	354	137
Total	3,912	1,969	5	1,110	346

What waste land remains is situated mainly in the poor and hilly tracts, and does not offer much scope for further extension of cultivation. In the open portion or Haveli, every available acre of land has been taken up, and there are no proper grazing or even standing grounds for cattle. The gross cropped area is about 1,795 square miles, of which 156 square miles are double cropped. Wheat occupies 628 square miles, or 32 per cent. of the cropped area; rice, 193 square miles; *kodon* and *kutki*, 316 square miles; gram, 184 square miles; and the oilseed *til*, 154 square miles. As in other Districts, there has been considerable deterioration in cropping, wheat, which twelve years ago overshadowed all other crops in importance, being supplanted by millets and oilseeds of inferior value. The area sown singly with wheat is only about a third of what it was, while the practice of mixing it with gram has greatly increased in favour. Little cotton is grown in Jubbulpore, and that of a very coarse variety. Betel-vine gardens exist in a number of places, among the principal being the neighbourhood of Jubbulpore city and Bilehri. Fruits and vegetables are also grown to supply the local demand.

Cultivation expanded very largely up to 1892; but the famines produced a serious decline, and complete recovery had not been attained in 1903-4. The area sown with two crops has largely increased since 1864. *San*-hemp is a profitable minor crop which has lately come into favour. During the eleven years ending 1904, Rs. 22,000 was borrowed under the Land Improvement Act, mainly for the embankment of fields, and 4.65 lakhs under the Agriculturists' Loans Act, a third of which was distributed in the famine of 1897.

The cattle bred in the District are of no special quality. Many animals of the Gwalior and Saugor breeds are imported from outside, being purchased by the local agriculturists at Garhākotā fair. The price of cattle is said to have risen largely since the famines of 1897 and 1900, owing to the numbers killed for the export of hides and flesh. The returns show that about 13,000 are slaughtered annually, while in 1896-7 the number amounted to 41,000 out of a total of 490,000 shown in the District returns. Grazing is very scarce in the open embanked wheat lands of the Haveli, and most of the cattle are sent to the forests for grazing during the rains, when the fields do not require ploughing. Buffaloes are bred, and the cows are kept for the manufacture of *ghi*, while the young bulls are either allowed to die from neglect or sold in Chhattisgarh. Good cow buffaloes are expensive, their price being calculated at Rs. 12 or Rs. 13 for each seer of milk that they give. Ponies are bred to a small extent, and were also formerly imported from Saugor, but very few are purchased there now. Those who can afford it keep a pony for riding, as carts cannot travel over many portions of the District. Ponies, bullocks, and buffaloes are

also largely used for pack-carriage. Goats and sheep are kept for food and for the manufacture of *ghi*.

The maximum area irrigated is about 6,000 acres, of which 2,500 are under rice, and the remainder devoted to garden crops, sugar-cane, and a little wheat and barley. There are about 2,500 wells and 134 tanks. The embanked wheat-fields, which cover about 310 square miles, are, however, practically irrigated, and the crops grown in them are very seldom affected by deficiency of rainfall.

The total area of Government forests is 346 square miles, or 9 per cent. of the District area. The forests are scattered in small patches all over the hilly tract east of the railway along the length of the District, while to the west lies one important block in the Murwāra *tahsīl*, and a few smaller ones. The *sāl*-tree (*Shorea robusta*) occupies a portion of the Murwāra forests. The remainder are of the type familiar on the dry hills of Central India—low scrub jungle, usually open and composed of a large variety of species, few of which, however, yield timber or attain large dimensions. Teak is found in places mixed with other species. Among the more important minor products may be mentioned the *mahuā* flower, myrabolams, and honey. The forest revenue in 1903-4 was Rs. 42,000.

Iron ores, some of which are very rich, occur in several parts of the District, particularly in the Sihorā *tahsīl*. The iron is smelted in small furnaces by Agariās, and sold at Rs. 2-8 a maund.

Minerals.

Owing to the imperfect methods of refining, however, 50 per cent. is lost in working it up. The iron is of excellent quality, as it is smelted with charcoal, but it is believed that the deposits are not sufficiently large to repay the expenditure of capital on nonworks. Steel is made with manganese by similar methods at Johlī in Sihorā, and used locally for agricultural implements. Manganese ores occur at Gosalpur, Sihorā, Khitolā, and other villages, and mining leases have been taken out. Copper ores and argentiferous galena with traces of gold occur at Sleemanābād, and a mining lease has been obtained by a barrister of Jubbulpore. The limestone deposits of Murwāra are worked by a number of capitalists, European and native. The aggregate sales of lime in 1904 were 50,000 tons, valued at nearly 5 lakhs. About 2,500 labourers are employed, principally Kols and Gond. The largest manufacturers of lime also own a fuller's earth quarry, the produce of which is sold to paper-mills. Agate pebbles are abundant in the detritus formed by the Deccan trap, and are worked up into various articles of ornament by the local lapidaries. The true or Sulaimāni onyx is said to be sent to Cambay from Jubbulpore. There are a number of sandstone quarries in or near Murwāra, from which excellent stone is obtained and exported in the shape of posts and slabs. Chips of limestone marble are exported for the facing of walls.

Cotton hand-weaving was formerly an important industry, but has been reduced by the competition of the mills. The principal centres are Garhā and Majholi. The coloured *sāris* generally worn by women are still woven by hand. The best cloths and carpets are dyed after being woven, *āl* or Indian madder being used for these heavy cloths, as the foreign dyes change colour and are partly fugitive. Bijerāghogarh in Murwāra and Ramkhiriā and Indrāna in Sihorā are the principal dyeing centres. Brass and copper vessels are made at Jubbulpore, by both hammering and casting, and cups and ornaments at Panāgar. Glass bangles and the round glass flasks in which Ganges water is carried are produced at Katangī. At Tewar near the Marble Rocks various kinds of vessels of white sandstone, marble images, agate studs, and other small ornaments are made by the caste of Larhiās or stone-cutters.

**Trade and
communications.**

The Gokuldās Spinning and Weaving Mills, with 288 looms and 15,264 spindles, produced 10,200 cwt. of yarn and 4,798 cwt. of cloth in 1904. The mills are being enlarged by the addition of 300 looms. Only the coarser counts of yarn are woven, and the produce is sold locally. Large pottery works, started in 1892, turn out roofing and flooring tiles, bricks, and stoneware pipes, which are sold in the local market and also exported. The raw material is obtained from the large deposits of white clay formed from the limestone rocks, and the value of the produce in 1904 was 2 lakhs. A brewery, which was opened in 1897, sends beer to all parts of India. In connexion with the brewery, there is an ice factory which supplies the local demand. All these factories and also a gun-carriage factory and an oil- and flour-mill are situated at Jubbulpore. In Murwāra eight small flour-mills have been started, being worked by water power and owned by natives; and there are also paint- and oil-mills, worked by water power, in which chocolate-coloured paint is produced from yellow ochre and red oxide of iron. There are six printing presses in the city of Jubbulpore.

Wheat and oilseeds are the principal exports. Hemp (*san*) is sent to both Calcutta and Bombay for export to England. Considerable quantities of *gñi* and forest produce are dispatched from Jubbulpore, but most of this comes from Seonī and Mandlā. Hides and horns, bones, and dried beef are also largely exported. Other exports are the manufactured and mineral products already mentioned. Salt comes principally from the Sāmbhar Lake and also from Bombay and Gujarāt, sugar from the Mauritius, and *gur* (unrefined sugar) from Bihār. Kerosene oil is now universally used for lighting, vegetable oil being quite unable to compete with it. Cotton cloth is imported from Ahmadābād and also from the Berār and Nāgpur mills, as the local mills cannot weave cloth of any fineness. There is a considerable trade in aniline dyes, and synthetic indigo has begun to find a market within the last

few years. Transparent glass bangles are now brought in large numbers from Germany. A European firm, dealing in oilseeds, wheat, and myrabolams, has most of the export trade. The rest of the traffic is managed by Bhātias from Bombay and Cutchī Muhammadans. Mār-wāris act only as local brokers, and do not export grain by rail. The leading weekly markets are at Panāgar, Barelā, Shahpurā, Pātan, Katangī, Bilherī, Silondī, and Umariā. Numerous religious fairs are held at the different sacred places on the Narbadā and elsewhere, but trade is important only at those of Bherāghāt and Kūmbhi.

The main line of railway from Bombay to Calcutta runs through the centre of the District with a length of 93 miles, and nine stations are situated within its limits, including the three towns of Jubbulpore, Sihorā, and Murwāra. At Jubbulpore the Great Indian Peninsula Railway meets the East Indian. From Katnī junction the Bina-Katnī connexion of the Great Indian Peninsula Railway branches off to Damoh and Saugor in the west, and a branch of the Bengal-Nāgpur Railway leads east to Bilāspur. The Sātpurā extension of the Bengal-Nāgpur Railway, which connects Jubbulpore with Gondīā station, situated about 80 miles from Nāgpur towards Calcutta, has recently been completed.

From Jubbulpore a number of metalled roads lead to outlying Districts which, before the opening of the recently constructed railway lines, were important trade and military routes. These are the Jubbulpore-Damoh (63 miles), the Jubbulpore-Seonī (86 miles), and the Jubbulpore-Mandlā (58 miles) roads. Other roads lead from Jubbulpore to Pātan, Deorī, and Dindorī in Mandlā, of which the two latter are partly metalled, while the Pātan road is unmetalled. From the south-west of the District trade goes to Shahpurā station. The principal roads from Sihorā are towards Pātan and Majholī, and are unmetalled. A considerable amount of trade comes to Katnī from the Native States to the north, chiefly by roads from Bijerāghogharh, from Rewah through Barhī, and from Damoh. The communications in the south of the District are excellent, but those in the north are not so advanced, apart from the railways. The total length of metalled roads is 108 miles and of unmetalled roads 301 miles, and the expenditure on maintenance in 1903-4 was Rs. 67,000. More than 200 miles of the more important roads are managed by the Public Works department, and the remainder by the District council. There are avenues of trees on 74 miles.

Failures of crops occurred in Jubbulpore District from excessive winter rain in 1818-9 and from deficiency of rainfall in 1833-4, causing considerable distress. In 1868-9, the year of the Bundelkhand famine, the Murwāra *tahsil* was severely affected, and a large decrease of population was shown at the

Famine.

following Census. The District then continued prosperous until 1893-4, when for three years in succession the spring crops were spoilt by excessive winter rain. The poorer classes were distressed in 1896, and some relief was necessary, while in the following year Jubbulpore was very severely affected. Nearly 100,000 persons, or 13 per cent. of the population, were in receipt of relief in March, 1897, and the total expenditure was 19 lakhs. After two favourable seasons followed the famine of 1899-1900. The failure of crops in this was, if anything, more extensive than in 1897; but the people were in a better condition to meet it, and owing to the generous administration of relief the effect of the famine was far less marked. The numbers on relief reached 65,000, or nearly 9 per cent. of the population, in July, 1900, and the total expenditure was 9 lakhs. A number of tanks were constructed or repaired by Government agency and some field embankments were made, besides various improvements in communications.

The Deputy-Commissioner is aided by four Assistant and Extra-Assistant Commissioners. For administrative purposes the District is divided into three *tahsils*, each of which has a *tahsīl-dār*, with *naib-tahsīldārs* at Sihorā and Murwarā. **Administration.**

Jubbulpore is the head-quarters of an Executive Engineer, who is in charge of Jubbulpore, Mandlā, and Seonī Districts, of an Executive Engineer for irrigation, and of a Forest officer.

The civil judicial staff consists of a District and three Subordinate Judges, a Small Cause Court Judge for Jubbulpore city, and a Munsif for the Jubbulpore *tahsīl*. The Divisional and Sessions Judge of the Jubbulpore Division has jurisdiction in the District. Crime is light, but the District is sometimes visited by professional coiners or dacoits from the neighbouring Native States.

Neither the Gond nor the Marāthā government had any fixed principles for the realization of revenue, nor were any rights in land recognized. The policy of the Marāthās was directed merely to the extortion of as much money as possible. Rents were commonly collected from the ryots direct, and when farming was practised short leases only were granted on very high rents, which sometimes amounted to more than the village 'assets.' For some years after the cession in 1818 short-term settlements were made, the demand being fixed on the first occasion at 4.18 lakhs, subsequently rising in 1825 to 6.41 lakhs. This assessment proved, however, too heavy, and in 1835 a twenty years' settlement was made and the revenue fixed at 4.76 lakhs. Under it the District prospered greatly. Revision was postponed for some years owing to the Mutiny; but in 1863 a thirty years' settlement was concluded, at which the revenue was raised to 5.69 lakhs, including Rs. 60,000 assessed on the subsequently included estate of Bijē-rāghogār. During the currency of this settlement, which almost coin-

cided with the opening of the railway, Jubbulpore enjoyed a period of great agricultural prosperity. Cultivation increased by 35 per cent. and the price of wheat by 239 per cent., while that of other grains doubled. The income of the landholders rose by 61 per cent., mainly owing to large enhancements of the rental. The latest settlement, commenced in 1888 and completed in 1894, raised the revenue to 10 lakhs, an increase of 65 per cent. The new assessment was not excessive, and would have been easily payable: but the successive disastrous seasons, of which mention has been made, necessitated substantial reductions in the demand, and the revenue in 1903-4 had been reduced to Rs. 8,77,000. The average rental incidence per cultivated acre at settlement was Rs. 1 3 8 (maximum Rs. 3-12-1, minimum R. 0-3-1), and the revenue incidence was R. 0 11 11 (maximum Rs. 1-15-3, minimum R. 0-1-7).

The total receipts from land revenue and from all sources have been, in thousands of rupees:—

	1880-1	1890-1.	1900-1	1903-4
Land revenue.	5,73	5,78	9,16	8,67
Total revenue.	11.41	12.76	14.87	15.03

Local affairs outside municipal areas are entrusted to a District council, under which are three local boards, each having jurisdiction over one *tahsil*. The local boards have no independent income, but perform inspection duty and supervise minor improvements. The income of the District council in 1903-4 was Rs. 87,000. The expenditure was Rs. 84,000, mainly on public works (Rs. 29,000) and education (Rs. 24,000). JUBBULPORE CITY, SIHORĀ, and MURWĀRA are municipalities.

The police force consists of 751 officers and men, including a special reserve of 55 men, 8 railway police, and 10 mounted constables, under a District Superintendent. There are 1,721 village watchmen for 2,298 inhabited villages. The District has a Central jail, with accommodation for 1,463 prisoners, including 150 female prisoners. The daily average number of male prisoners in 1904 was 777, and of female prisoners 32. Cloth for pillow and mattress cases, net money-bags, wire netting, and Scotch and Kidderminster carpets are made in the Central jail.

In respect of education Jubbulpore stands second among the Districts of the Province, 5.3 per cent. of the population (10 males and 0.6 females) being able to read and write. Statistics of the number of pupils under instruction are as follows: (1880-1) 8,300, (1890-1) 9,805, (1900-1) 12,070, (1903-4) 14,141, including 1,811 girls. The educational institutions comprise an Arts college in

Jubbulpore city, which also contains law and engineering classes; 3 high schools; 3 training schools for teachers; 6 English and 15 vernacular middle schools; 164 primary schools; and 2 special schools. The total expenditure on education in 1903-4 was Rs. 1,40,000, of which Rs. 16,000 was realized from fees. The percentage of children under instruction to those of school-going age is 14. Jubbulpore city also contains a Reformatory, to which youthful offenders from the whole Province are sent and taught different handicrafts. It had 125 inmates in 1904.

The District has 14 hospitals and dispensaries, with accommodation for 131 in-patients. In 1904 the number of cases treated was 106,386, of whom 1,585 were in-patients, and 3,422 operations were performed. The expenditure was Rs. 20,000, chiefly from Provincial funds. A lunatic asylum at Jubbulpore contains 178 patients.

Vaccination is compulsory in the municipalities of Jubbulpore city (including the cantonment), Sihorā, and Murwāra. The proportion of successful vaccinations in 1903-4 was 33 per 1,000 of the population.

[Khān Bahādūr Aulād Husain, *Settlement Report* (1895). A District Gazetteer is being compiled.]

Jubbulpore Tahsīl.—Southern *tahsīl* of Jubbulpore District, Central Provinces, lying between 22° 49' and 23° 32' N. and 79° 21' and 80° 36' E., with an area of 1,519 square miles. The population decreased from 361,889 in 1891 to 332,488 in 1901. The density is 219 persons per square mile, which is considerably above the District average. The *tahsīl* contains one town, JUBBULPORE CITY (population, 90,316), the head-quarters of the District and *tahsīl*; and 1,076 inhabited villages. Excluding 113 square miles of Government forest, 63 per cent. of the available area is occupied for cultivation. The cultivated area in 1903-4 was 799 square miles. The demand for land revenue in the same year was Rs. 4,54,000, and for cesses Rs. 51,000. The *tahsīl* contains part of the highly fertile wheat-growing tract known as the Jubbulpore Haveli on the west, some good but uneven land lying east of the railway, and some hill and forest country to the east towards Kundam and Baghrāji and also on the southern border.

Jubbulpore City.—Head-quarters of the Division, District, and *tahsīl* of the same name, Central Provinces, situated in 23° 10' N. and 79° 57' E., 616 miles from Bombay by the Great Indian Peninsula Railway, and 784 miles from Calcutta by the East Indian, the two lines meeting here. A branch narrow-gauge railway has recently been opened to Gondīā, 117 miles distant, on the Bengal-Nāgpur system. The city stands in a rocky basin surrounded by low hills, about 6 miles from the Narbadā river. The gorge of the Narbadā at Bherāghāt, where the river passes through the well-known MARBLE

Rocks, is 13 miles distant. Jubbulpore is well laid out, with broad and regular streets, and numerous tanks and gardens have been constructed in the environs. Its elevation is 1,306 feet above sea-level. The climate is comparatively cool, and Jubbulpore is generally considered the most desirable of the plain stations in the Central Provinces, of which it ranks as the second city. It is steadily increasing in importance, the population at the last four enumerations having been : (1872) 55,188, (1881) 75,075, (1891) 84,481, and (1901) 90,316. Of the total in 1901, 63,997 were Hindus, 21,036 Muhammadans, and 3,432 Christians, of whom 2,000 were Europeans and Eurasians. Four miles to the west of the city, and included in the municipality, is Garhā, once the capital of the Gond dynasty of Garhā-Mandlā, whose ancient keep, known as the Madan Mahal, still crowns a low granite range with the old town lying beneath it. This was constructed about 1100 by Madan Singh, and is now in ruins. It is a small building of no architectural pretensions, and its only interest lies in its picturesque position, perched upon the top of the hill on a huge boulder of rock. In the sixteenth century the capital was removed to Mandlā, and the importance of Garhā declined. Of the history of Jubbulpore itself nothing is known until it was selected by the Marāthās as their head-quarters on the annexation of Mandlā in 1781. In an old inscription now in the Nāgpur Museum the name is given as Javalipatna. Jubbulpore subsequently became the head-quarters of the Commissioner of the Saugor and Nerbudda Territories, which were merged in the Central Provinces in 1861.

A municipality was constituted in 1864. The municipal receipts and expenditure during the decade ending 1901 averaged Rs. 2,62,000 and Rs. 2,57,000 respectively. In 1903-4 the income was Rs. 3,54,000, the main sources being octroi (Rs. 1,65,000) and water rate (Rs. 29,000); and the total expenditure was Rs. 2,38,000, including refunds (Rs. 56,000), conservancy (Rs. 34,000), repayment of loans (Rs. 28,000), general administration and collection of taxes (Rs. 21,000), and water supply (Rs. 13,000). Previous to the construction of the existing water-works, the town depended for its supply on a number of unreliable wells, and it was not uncommon for water to be retailed in the hot season at one or two annas a pot. The water-works were opened in 1883, and extended to the cantonment and the civil station in 1894. They consist of a reservoir constructed on the Khandāri stream, about seven miles from the city. The masonry embankment is 1,680 feet long and 66 feet high, and the catchment area of the reservoir is $5\frac{1}{4}$ square miles. Water is conveyed to the city in pipes by gravitation. The total cost of the works was 9.4 lakhs, including the extension. The effect of the constant intake of water in a city whose situation does not provide good natural drainage has, however, been to render

the ground somewhat sodden, and a drainage scheme to counteract this tendency is under consideration.

Jubbulpore includes a cantonment with a population of 13,157. The receipts and expenditure of the cantonment fund during the decade ending 1901 averaged about Rs. 25,000, and in 1903-4 they amounted to Rs. 32,000. The ordinary garrison has hitherto consisted of one battalion of British and one of Native infantry, a squadron of Native cavalry, and two field batteries; but it is proposed to increase it. There are also two companies of Railway Volunteers, and one of the Nāgpur Volunteer Rifles. Jubbulpore is the head-quarters of a general officer, and the garrison is included in the Mhow division. A central gun-carriage factory for India was opened in 1905. A Government grass farm, combined with a military dairy, has also been established.

Jubbulpore is an important commercial and industrial town. It receives the grain and other produce of the greater part of Jubbulpore District, and of portions of Seonī and Mandlā. The factories include spinning and weaving mills, pottery works, a brewery and ice factory, oil- and flour-mills, the workshops of the Great Indian Peninsula Railway, and four hydraulic presses for *san*-hemp. The local handicrafts are cloth-weaving, brass-working, stone-cutting, and the manufacture of images from marble, and of studs, buttons, and other ornaments from agate pebbles. Till lately a considerable tent-making industry was carried on, at first by the Thags, who were kept in confinement here, and their descendants, and afterwards at a Reformatory school; but this has now ceased. There are six printing presses, with English, Hindī, and Urdū type: and an English weekly and a Hindī newspaper are published.

Jubbulpore is the head-quarters not only of the ordinary District staff, but of the Commissioner and Divisional Judge of the Jubbulpore Division, a Conservator of Forests, a Superintending and an Irrigation Engineer, the Superintendent of Telegraphs for the Central Provinces, and an Inspector of Schools. One of the three Central jails and one of the two lunatic asylums in the Province are located here. The industries carried on in the Central jail include the weaving of cloth for pillow and mattress cases, and of net money-bags, the manufacture of wire netting for local use, and of thick bedding cloth and Scotch and Kidderminster carpets for sale. Fifty-five looms were employed in making carpets in 1903-4. The Church Missionary Society, the Zanāna Mission, and the Roman Catholic, Wesleyan, and American Methodist Churches have mission stations in Jubbulpore, and support several orphanages and schools. A Government Arts college affiliated to the Allahābād University, with law and engineering classes attached to it, had 114 students in 1903-4. There are also three high schools, one maintained by the Church Missionary Society with 79 pupils,

one by a Muhāmmadan society with 8 pupils, and one by a Hindu society with 87 pupils, training institutions for male and female teachers, and 53 other schools. Schools for European boys and girls are maintained by the Church Missionary Society and the Roman Catholic Mission, with the assistance of Government grants. There is also a Reformatory, to which youthful offenders from the whole Province are sent and taught different handicrafts. It contains 125 inmates, and is the successor of the old school for the children of Thags arrested in the Central Provinces. Jubbulpore contains a general hospital, the Lady Elgin Hospital for women, three dispensaries, and a veterinary dispensary.

Jubo.—Town in the State of Khairpur, Sind, Bombay, situated in 26° 22' N. and 69° 34' E. Population (1901), 6,924. The inhabitants deal chiefly in goats and sheep; and rough carpets of goat's hair are also manufactured. Jubo contains the ruins of a fort built by the late Mīr.

Jūkal.—'Crown' sub-*tālūk* of the Atrāf-i-balda District, Hyderābād State, lying to the south-west of Nizāmābād District, with an area of 87 square miles. Its population in 1901 was 15,789, compared with 10,883 in 1891. The sub-*tālūk* contains 22 villages, and Jūkal (3,350) is the head-quarters. The land revenue in 1901 was Rs. 66,000. The soil is mostly *regar* or black cotton soil.

Jullundur Division (*Jālandhar*).—A Division of the Punjab, stretching from the borders of Tibet on the north-east across the valleys of the Upper Beās and Sutlej to the borders of the Bikaner desert on the south-west. It lies between 29° 55' and 32° 59' N. and 73° 52' and 78° 42' E. The Commissioner's head-quarters are at the town of Jullundur. The Division comprises all varieties of scene and soil, from the tumbled masses of the Outer Himālayas, in Kulū and Kāngra, to the fertile plains of Jullundur or the arid tracts of Ferozepore. The population increased from 3,787,945 in 1881 to 4,217,670 in 1891, and to 4,306,662 in 1901. The area is 19,410 square miles, and the density of population 222 persons per square mile, as compared with 209 for the Province as a whole. In 1901 Hindus formed 52 per cent. of the population (2,242,490), while other religions included 1,457,193 Muhammadans, 591,437 Sikhs, 5,562 Jains, 4,176 Buddhists, 33 Pārsīs, and 5,766 Christians (of whom 1,919 were natives). The Division contains five Districts, as shown in the table on the next page.

Of these, Kāngra lies entirely in the hills, sloping away to the sub-montane District of Hoshiārpur. The rest lie in the plains. The Division contains 6,415 villages and 37 towns, of which the following had in 1901 a population exceeding 20,000: JULLUNDUR (67,735), FEROZEPURE (49,341), and LUDHIĀNA (48,649). Besides the adminis-

District.	Area in square miles.	Population, 1901.	Land revenue and cesses, 1903-4, in thousands of rupees.
Kāngra	9,978	768,124	10,73
Hoshiārpur	2,244	989,782	16,41
Jullundur	1,431	917,587	17,75
Ludhiāna	1,455	673,097	12,42
Ferozepore	4,302	958,072	14,27
Total	19,410	4,306,662	71,58

trative charge of these British Districts, the Commissioner has political control over five Native States, which are shown below, with their area and population :

State.	Area in square miles.	Population, 1901.
Kapūrthala	630	314,351
Mandī	1,200	174,045
Māler Kotla	167	77,506
Suket	420	54,676
Faridkot	642	124,912
Total	3,059	745,490

The total population of these Native States increased from 620,203 in 1881 to 709,811 in 1891, and 745,490 in 1901, of whom $52\frac{1}{2}$ per cent. were Hindus (392,148), while other religions included 245,403 Muhammadans, 105,304 Sikhs, 1,993 Jains, 573 Buddhists, 4 Pārsīs, and 65 Christians. The density of the population is 244 persons per square mile. The States contain 1,053 villages and 12 towns, of which MĀLER KOTLA (21,122) alone exceeds 20,000 inhabitants.

Ludhiāna, Ferozepore, and Jullundur are the only towns of commercial importance, while Kāngra and Jawāla Mukhi are famous for their religious associations. The Division practically corresponds to the ancient Hindu kingdom of Trigartta. Kāngra fort has been many times besieged, while more recent battle-fields are those of Mudki, Ferozeshāh, Aliwāl, and Sobraon in the first Sikh War (1845).

Jullundur District (*Jālandhar*).—District in the Jullundur Division, Punjab, lying between $30^{\circ} 56'$ and $31^{\circ} 37'$ N. and $75^{\circ} 5'$ and $76^{\circ} 16'$ E., with an area of 1,431 square miles. It occupies the southern part of the *doāb* (called the BĪST JULLUNDUR DOĀB), or country between the Beās and Sutlej. The latter river forms its southern border, separating it from Ludhiāna and Ferozepore, and in shape the District is an irregular triangle with its base on that river. The State of Kapūrthala separates it on the west from the Beās and its confluence with the Sutlej. Along its north-east border lies the

District of Hoshiārpur ; and in the centre of this portion, between the Jullundur and Nawāshahr *tahsils*, is a detached tract of Kapūrthala territory which forms the Phagwāra *tahsil* of that State. The valley of

**Physical
aspects.**

the Sutlej is marked by a high, well-defined bank. North of this lies a plateau whose highest point, at Rāhon near the eastern corner of the District, is 1,012 feet above sea-level. Thence it slopes gradually westwards towards the Beās. No hill or rock breaks the level of this plateau, which lies entirely within the zone of rich cultivable soil that skirts the foot of the Himālayas, and was regarded by the Sikhs as the garden of the Punjab. At places a few acres are covered with sand ; but, except in these rare spots, one vast sheet of luxuriant and diverse vegetation spreads over the plain from end to end. South of the high bank of the Sutlej lies the Bet or *khādar*, a strip of alluvial soil annually fertilized by deposits of silt from that river, although the opening of the Sirhind Canal has greatly reduced its flow, and it now runs almost dry for eight months in the year. The only important stream is the East or White Bein, which, rising east of Rāhon and running along the Hoshiārpur border, traverses the Phagwāra *tahsil* of Kapūrthala State, and thence meanders westwards across the District till it falls into the Sutlej near its junction with the Beās. In its earlier course it receives several torrents from the Siwālik Hills in Hoshiārpur. These bring down deposits of sand, which are doing considerable damage to the cultivated lands on its eastern bank.

The District is situated entirely in the alluvium, and contains nothing of geological interest. Cultivation has advanced to such a point that there is little in the way of natural vegetation beyond the weeds that come up with the crops throughout North-west India. Trees are almost always planted : and, owing to the proximity of the Himālayas, several kinds succeed very well, among them the mango and *ber* (*Zizyphus Jujuba*). The river banks are in places fringed with a dense growth of high grasses, as in Ferozepore and adjoining Districts.

Wolves are seen but very rarely, and towards Kapūrthala antelope, *nilgai*, and hares are found. Field-rats abound, and do no small amount of damage to the crops.

The climate is, for the plains, temperate. In the hot season, with the exception of June and July, the heat is not excessive ; in the cold season frosts are light, and confined to January and February. The average mean temperature of January is 56°, and of June 93°. The mortality varies very much with the rainfall, owing to the prevalence of malaria in rainy years. Plague made its first appearance in the Punjab in the village of Khatkar Kalān in this District in 1897.

Owing to the nearness of the hills, the rainfall is fairly constant.

The annual average varies from 24 inches at Phillaur to 27 at Jullundur, 22 inches falling in the summer months and only 5 in the winter. During the ten years ending 1903 the heaviest fall was 60 inches at Nawāshahr in 1900-1, and the lightest 11 inches, in 1899-1900, at Jullundur. There were disastrous floods in 1875 and 1878, owing to the railway embankment giving insufficient passage to the floods caused by the unusually heavy rains.

Early legends attribute the name of the *doāb* to the Daitya king Jālandhara, who was overwhelmed by Siva under a pile of mountains. His mouth, the legend says, was at JAWĀLA MUKHI, his feet at Multān, where in ancient times the Beās and Sutlej met, and his back under the upper part of the Jullundur Doāb, including the present District. The earliest mention of Jullundur occurs in the accounts of the Buddhist council held at Kuvana, near that city, early in the Christian era, under the auspices of Kanishka. When visited in the seventh century by Hiuen Tsiang, it was the capital of the Rājput kingdom of Trigartta, which also included the modern Districts of Hoshiārpur and Kāngra and the States of Chamba, Mandī, and Suket. Towards the end of the ninth century the *Rājataranginī* records the defeat of Prithwī Chandra, Rājā of Trigartta, by Sankara Chandra of Kashmīr. The town was taken by Ibrāhīm Shāh Ghorī about 1088; and from that time the country appears to have remained under Muhammadan rule, the Jullundur Doāb being generally attached to the province of Lahōre. During the Saiyid dynasty (1414-51), however, the authority of Delhi was but weakly maintained; and the *doāb* became the scene of numerous insurrectionary movements, and especially of the long campaign of the Khokhar chief Jasrath against the ruling power. Near Jullundur the Mughal forces concentrated in 1555, when Humāyūn returned to do battle for his kingdom, and the neighbourhood was the scene of Bairām's defeat by the imperial forces in 1560. Adīna Beg, the last and most famous of the governors of Jullundur, played an important part during the downfall of Muhammadan power in the Punjab, holding the balance between the Delhi emperor, the Sikhs, and Ahmad Shāh Durrānī. Both Nūrmahal and Kartārpur were sacked by Ahmad Shāh, and to avenge the desecration of the latter place the Sikhs burnt Jullundur in 1757.

The Sikh revolt against the Mughal power early found strong support in the District, and a number of petty chieftains rapidly established themselves by force of arms as independent rulers throughout the *doāb*. In 1766 the town of Jullundur fell into the hands of the Faizullahpuria *misl*, or confederacy, then led by Khushhāl Singh. His son and successor, Budh Singh, built a masonry fort in the town, while several other leaders fortified themselves in its suburbs. Phillaur was seized

by Budh Singh, who made it the capital of a considerable State; and the Muhammadan Rājputs of Nakodar (on whom the town had been conferred in *jāgīr* during the reign of Jahāngīr) were early ousted by Sardār Tāra Singh, Ghaiba, who built a fort, and made himself master of the surrounding territory. But meanwhile Ranjīt Singh was consolidating his power in the south; Phillaur fell into his hands in 1807, and he converted the *sarai* into a fort to command the passage of the Sutlej; and in 1811 Dīwān Mohkam Chand was dispatched to annex the Faizullahpuria dominions in the Jullundur Doāb. Budh Singh fled across the Sutlej; and though his troops offered some resistance to the invader, the Mahārājā successfully established his authority in the autumn of that year. Thenceforth Jullundur was the capital of the Sikh possessions in the *doāb* till British annexation. Nakodar was seized in 1816, the petty Sardārs were gradually ousted from their estates, and the whole country brought under the direct management of the Sikh governors. Here, as elsewhere, their fiscal administration proved very oppressive, especially under Shaikh Ghulām Muḥī-ud-dīn, the last official appointed from the court of Lahore, a tyrannical ruler, who exacted irregular taxes. He made over the tract to his son, Imām-ud-dīn, but neither resided regularly in the *doāb*, their charge being entrusted to lieutenants, the best known of whom were Sandhe Khān in Hoshiārpur and Karīm Bakhsh in Jullundur.

At the close of the first Sikh War the British annexed the whole of the Jullundur Doāb, and it became the Commissionership of the Trans-Sutlej States. For two years the administration was directly under the Supreme Government; but in 1848 the Commissioner became subordinate to the Resident at Lahore, and in the succeeding year, when events forced on the annexation of the Punjab, the administration of the *doāb* was assimilated to the general system. The Commissioner's head-quarters were fixed at Jullundur, and the three Districts of Jullundur, Hoshiārpur, and Kāngra were created. The fort at Phillaur was occupied as an artillery magazine, and cantonments formed there and at Nakodar, which continued to be occupied till 1857 and 1854 respectively.

In 1857 the native troops stationed at Jullundur and Phillaur mutinied and marched off to join the rebel forces at Delhi; the authorities were, however, not altogether unprepared, and though the mutineers succeeded in escaping unmolested, they were prevented from doing serious damage. Rājā Randhīr Singh of Kapūrthala rendered invaluable assistance at this time, both in supplying troops and, by the exercise of his personal influence, in helping to preserve the peace of the *doāb*.

The tombs at NAKODAR and Nur Jahān's *sarai* at NŪRMAHAL are the chief remains of antiquarian interest.

The population of the District at the last four enumerations was: (1868) 794,418, (1881) 789,555, (1891) 907,583, and (1901) 917,587, dwelling in 10 towns and 1,216 villages. It increased by 1.1 per cent. during the last decade, the increase being greatest in the Jullundur *tahsil* and least in Phillaur. The density of population is the highest in the Province. The District is divided into the four *tahsils* of JULLUNDUR, NAWĀSHAHR, PHILLAUR, and NAKODAR, the head-quarters of each being at the place from which it is named. The chief towns are JULLUNDUR, the head-quarters of the District, and the municipalities of KARTĀRPUR, ALĀWALPUR, PHILLAUR, NŪRMAHAL, RĀHON, NAWĀSHAHR, BANGA, and NAKODAR.

The following table shows the chief statistics of population in 1901 :—

<i>Tahsil.</i>	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Jullundur .	391	3	409	305,976	782.4	+ 3.6	14,209
Nawāshahr .	299	3	274	196,339	656.7	- 4.5	7,820
Phillaur .	298	3	222	192,860	647.2	+ 1.7	6,285
Nakodar .	371	1	311	222,412	599.5	+ 2.5	4,789
District total	1,431	10	1,216	917,587	641.2	+ 1.1	33,103

NOTE.—The figures for the areas of *tahsils* are taken from the revenue returns. The total District area is that given in the *Census Report*.

Muhammadans number 421,011, or more than 45 per cent. of the total; Hindus, 368,051, or 40 per cent.; and Sikhs, 125,817, or nearly 14 per cent. Punjābi is spoken throughout the District.

By far the most numerous caste are the Jats or Jāts, who number 185,000, or 20 per cent. of the total, and own half the villages. About 185 clans are enumerated in the District. Some of these claim a Rājput origin; others have no traditions of being anything but Jats. Taken as a whole, they are an honest, industrious, sturdy, and vigorous folk, addicted to no form of serious crime, except female infanticide. The Muhammadan Jats are inferior to the Hindu and Sikh. The Arains (143,000) come next, comprising one-seventh of the total. They are entirely Muhammadans, and are a peaceable people without the sturdy spirit of the Jats, but quite as efficient cultivators. The Rājputs (50,000) come third. More than four-fifths are Muhammadans, but they nearly all preserve Hindu customs. They formerly held a more important position in the District than they do now, and carefully maintain the traditions of their former greatness; and, despising work as beneath their dignity, they are very inferior as agriculturists to the Jats. The Khokhars are entirely Muhammadan

they are often considered Rājputs, but the claim is not generally accepted, and they do not intermarry with Rājputs. The Awāns (12,000) also are all Muhammadans. They claim to have come from Arabia, but their observance of Hindu usages marks them as converts to Islām. Other agricultural tribes worthy of mention are Sainis (16,000), who are clever market-gardeners; Kambohs (6,000), mainly Sikhs; and Gūjars (20,000), who are found everywhere. The Khattris (26,000) are the most important of the commercial tribes, the Baniās numbering only 6,000. Of menial tribes the most important are the Chamārs (leather-workers, 96,000), Chūhrās (scavengers, 41,000), Kumhārs (potters, 15,000), Lohārs (blacksmiths, 15,000), Mochīs (cobblers, 20,000), Tarkhāns (carpenters, 32,000, many of whom are landowners), Jhīnwars (watermen, 29,000), Julāhās (weavers, 16,000), Nais (barbers, 15,000), Chhīmbas and Dhobīs (washermen, 12,000), and Telis (oil-pressers, 14,000). Brāhmans number 32,000. Half the population is agricultural and one-fourth industrial.

The Jullundur Mission is one of the stations belonging to the American Presbyterian Board of Foreign Missions. It was established in 1847. In 1901 the District contained 276 native Christians.

Lying as Jullundur does close to the Outer Himālayas, an absolute failure of the rains is almost unknown; and apart from the protection afforded by the numerous wells, the soil is sufficiently charged with moisture to resist anything but absolute drought. More than 40 per cent. of the cultivated area is a good alluvial loam; patches of clay soil, amounting in all to 13 per cent. of the cultivated area, are found all over the District, while 24 per cent. is sandy soil, of which half is found in the Jullundur *tahsil*. A small proportion is uncultivable, being covered by sandhills.

The District is held almost entirely by communities of peasant proprietors, large estates covering only about 37 square miles.

The area for which details are available from the revenue records of 1903-4 is 1,357 square miles, as shown below —

<i>Tahsil.</i>	Total.	Cultivated.	Irrigated.	Cultivable waste.
Jullundur . .	391	337	104	23
Nawāshahr . .	304	217	146	43
Phillaur . .	291	244	111	19
Nakodar . .	371	295	118	25
Total	1,357	1,093	479	110

The chief crop of the spring harvest is wheat, which occupied 430 square miles in 1903-4; gram covered 177 square miles; and barley only 16 square miles. Maize is the staple product of the

autumn harvest, occupying 149 square miles, while pulses covered 121. Sugar-cane, which occupied 49 square miles, is commercially of the greatest importance to the cultivator, as he looks to this crop to pay the whole or the greater part of the revenue. Very little great millet is grown (14 square miles), and practically no spiked millet; cotton covered 28 square miles, and rice 3,188 acres.

The cultivated area increased by only 800 acres during the ten years ending 1901, and hardly any further increase can be anticipated. There has, however, been a considerable development of well-sinking, more than 8,000 wells having been constructed since the settlement of 1880-5. Practically no cultivable land is now left untilled; and the pressure on the soil, which in 1901 was, excluding the urban population, 718 persons per cultivated square mile, can only be met by emigration. The District has already sent numbers of its sons to the Chenāb Colony, to the Jamrao Canal in Sind, to Australia and East Africa; and many are in civil or military employment in other parts of India. The remittances of these emigrants add enormously to the natural resources of the District, and the greater portion of the Government revenue collected in it is required by the post offices to enable them to cash money orders issued on them. Loans under the Land Improvement Loans Act for the construction of wells are popular and faithfully applied; during the five years ending 1904 more than Rs. 54,000 was advanced for this purpose. Nothing has been done in the way of improving the quality of the crops grown.

Jullundur is not well adapted for breeding cattle, and it is estimated that for ploughing and working the wells no less than 10,000 bullocks per annum have to be imported. These are generally obtained at the Anritsar, Sirsa, and Hissār fairs, and from Patiala and Ferozepore. Although some places in the Jullundur Doāb are mentioned in the *Āin-i-Akbarī* as famous for a breed of horses, the ponies are not now specially valuable. One horse and four donkey stallions are kept by the District board. There are very few camels, and sheep and goats are not important. The country is so fully cultivated that little ground for grazing is left, except along the Sutlej and in places near the Bein. Large numbers of cattle are driven from a distance to these favoured spots, and considerable sums are levied in grazing fees by the owners of the land.

Of the total area cultivated in 1903-4, 479 square miles, or 44 per cent., were classed as irrigated. Of this area, 477 square miles were irrigated from wells, and 1,455 acres from streams and tanks. In addition, 56 square miles, or 5 per cent., were subject to inundation from the Sutlej. Wells are the mainstay of the District; and there are 28,609 masonry wells worked by cattle, chiefly on the rope-and-bucket system, besides 464 unbricked wells, water-lifts, and lever wells.

The Persian wheel is found where the soil is sandy and water near the surface.

The District contains two small plantations 'reserved' under the Forest Act, consisting chiefly of *shisham* and *kikar*, and covering 262 acres, with a military Reserve of 885 acres. It is on the whole well wooded, almost every one of the wells which it contains being surrounded by a small coppice; but, as already noticed, waste land is very scarce. Phillaur is the winter head-quarters of the Bashahr Forest division, and a great wood mart, to which quantities of timber are floated down the Sutlej and stored. Much also is brought for sale here from the Beās and the Sirhind Canal.

Kankar is plentiful, the best beds being within a radius of ten miles from Jullundur town. Saltpetre is manufactured from saline earth.

A great deal of cotton-weaving is carried on, the principal products being the coarse cotton cloth which supplies most of the dress of the people, and coloured stripes and checks. Large quantities of very coarse cotton fabrics (*khaddar*) are exported to Shikārpur and Sukkur in Sind. **Trade and communications.** Rāhon had once a great reputation for a superior cotton longcloth, but the industry is almost extinct. Silk-weaving is carried on at Jullundur town, and in 1899 employed 250 looms, the estimated out-turn being valued at 2 lakhs. The gold and silver manufactures are flourishing, but in no way remarkable, and the out-turn is insufficient for local requirements. Besides ornaments, silver wire and gold and silver lace are made. The District has some reputation for carpenter's work, and chairs are made at Kartārpur for the wholesale trade. Brass vessels are manufactured in many parts, the output being valued at Rs. 27,000, of which half is exported. The thin pottery known as 'paper pottery' is made in the District, and glazed and coloured tile-work of unusual excellence is turned out at Jullundur by one man. There are two flour-mills at Jullundur town, and attached to one of them is a small iron and brass foundry. The number of factory employés in 1904 was 73.

The traffic of the District is mainly in agricultural produce. In ordinary years grain is imported from Ludhiāna, Ferozepore, and the Sikh States for export to the hills: other articles of import are piece-goods from Delhi, Bombay, and Calcutta, iron from Ferozepore, Amritsar, and Karāchi, brass and copper vessels from Jagādhri, Amritsar, and Delhi, rice from Kāngra, and salt from the Mayo Mines. Sugar and molasses are largely manufactured to supply the markets of Bikaner, Lahore, the Punjab, and Sind. Wheat, cotton cloth, and silk goods are the other principal exports.

The District is traversed by the main line of the North-Western Railway, and branch lines are contemplated from Jullundur town to

Kapūrthala and Hoshiārpur. It is exceptionally well provided with roads, the total length of metalled roads being 158 miles and of unmetalled roads 337 miles. The most important of the former are the grand trunk road, which traverses the District parallel with the railway, and the road from Jullundur to Hoshiārpur; these, with some minor roads, 62 miles in length in all, are under the Public Works department, the rest being under the District board. The Sutlej is navigable only in the rains; there are twelve ferries.

Jullundur, thanks to the excellence of its soil and the nearness of the hills, is but little liable to drought. None of the famines that have visited the Punjab since annexation has affected the District at all seriously, and it was classed by the Irrigation Commission of 1903 as secure from famine. The area of crops matured in the famine year 1899-1900 amounted to 76 per cent. of the normal.

Famine.

The District is in charge of a Deputy-Commissioner, aided by three or four Assistant or Extra-Assistant Commissioners. It is divided into four *tahsils*, each under a *tahsildār* assisted by a *naib-tahsildār*: Jullundur comprises its northern portion, and Nawāshahr, Phillaur, and Nakodar, which lie in that order from east to west, the southern.

Administration.

The Deputy-Commissioner as District Magistrate is responsible for criminal justice. Civil judicial work is in charge of a District Judge, and both these officers are subordinate to the Divisional and Sessions Judge of the Jullundur Civil Division, which consists of the District of Jullundur alone. There are six Munsifs, three at head-quarters and one at each outlying *tahsil*. There are also a Cantonment Magistrate at Jullundur and eight honorary magistrates. The common forms of crime are burglary and theft.

In the revenue system of Akbar the present District formed part of the Duāba Bist Jālandhar, one of the *sarkārs* of the Lahore *Sūbah*. The later Mughal emperors soon dropped the cash assessments of Rājā Todār Mal as unprofitably just, and leased clusters of villages to the highest bidder. Under the Sikh confederacies even this remnant of system disappeared, and the ruler took whatever he could get. Ranjit Singh followed the same principle with a greater show of method, giving large grants of land in *jāgīr* on service tenure, and either leasing the rest to farmers or entrusting the collection of the revenue to *kārdārs*, who paid him as little as they dared. When in 1846 the *doāb* came into British possession, a summary settlement was made by John Lawrence. The assessment, which amounted to 13½ lakhs, worked well, and the total demand of the regular settlement (1846-51) was only Rs. 20,000 less. The assessment was again mainly guess-work, the demand of the summary settlement being varied only where circum-

stances suggested an increase or demanded some relief. A revision carried out between 1880 and 1885 resulted in a demand of 15 lakhs. This has been paid very easily ever since, and the District is prosperous and contented. The rates average Rs. 4-10-0 (maximum Rs. 5-8-0, minimum Rs. 3-12-0) on 'wet' land, and Rs. 1-8-0 (maximum Rs. 2-4-0, minimum 12 annas) on 'dry' land. The demand, including cesses, for 1903-4 was 17.8 lakhs. The average size of a proprietary holding is 1.8 acres.

The collections of land revenue alone and of total revenue are shown below, in thousands of rupees :—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . . .	12,24	13,82	14,22	14,05
Total revenue . . .	17,03	19,74	20,42	20,25

The District contains nine municipalities : JULLUNDUR, KARTARPUR, ALĀWALPUR, PHILLAUR, NŪRMAHAL, RĀHON, NAWĀSHAHR, BANGA, and NAKODAR. Outside these, local affairs are managed by the District board, which in 1903-4 had an income of Rs. 1,55,000. The expenditure was Rs. 1,48,600, public works and education being the principal items.

The regular police force consists of 453 of all ranks, including 56 cantonment and 78 municipal police. The Superintendent usually has three inspectors under him. The village watchmen number 1,305. There are twelve police stations, two road-posts, and two outposts. The fort at Phillaur was made over in 1891 to the Police Training School and central bureau of the Criminal Identification department. The District jail at head-quarters contains accommodation for 318 prisoners. The chief industries carried on in the jail are the manufacture of paper and lithographic printing.

The District stands nineteenth among the twenty-eight Districts of the Province in respect of the literacy of its population. In 1901 the proportion of literate persons was 3.6 per cent. (6.4 males and 0.3 females). The number of pupils under instruction was 7,624 in 1880-1, 15,102 in 1890-1, 13,191 in 1900-1, and 13,874 in 1903-4. The District possessed in 1903-4 a training school, 6 Anglo-vernacular high schools, 4 Anglo-vernacular and 7 vernacular middle schools, and 3 English and 124 vernacular primary schools for boys, and 23 vernacular primary schools for girls. In addition, there were 7 advanced and 262 elementary (private) schools. The number of girls in the public schools was 699, and in the private schools 941. The most important schools are at Jullundur town. The total expenditure on education in 1903-4 was 1.1 lakhs, the greater part of which was met by Local and Provincial funds.

Besides the Jullundur civil hospital, the District has ten outlying dispensaries. At these institutions 154,504 out-patients and 4,247 in-patients were treated in 1904, and 12,883 operations were performed. The expenditure was Rs. 20,000, contributed in nearly equal shares by District and municipal funds. There is a leper asylum at Dakhni.

The number of successful vaccinations in 1903-4 was 21,801, representing 24 per 1,000 of the population. Vaccination is compulsory in the town of Jullundur.

[H. A. Rose, *District Gazetteer* (in press); W. E. Purser, *Settlement Report* (1892).]

Jullundur Tahsīl (*Jālandhar*).—Northern *tahsīl* of Jullundur District, Punjab, lying between $31^{\circ} 12'$ and $31^{\circ} 37'$ N. and $75^{\circ} 26'$ and $75^{\circ} 49'$ E., with an area of 391 square miles. The population in 1901 was 305,976, compared with 295,301 in 1891. The head-quarters are at the town of JULLUNDUR (population, 67,735); and it also contains the towns of KARTĀRPUR (10,840) and ALĀWĀLPUR (4,423), with 409 villages. The land revenue and cesses in 1903-4 amounted to 4.8 lakhs. The greater part of the *tahsīl* consists of an upland plateau, with a light soil and frequent sand-hillocks, but along the north-eastern border is a belt of extremely fertile land averaging about 6 miles in width.

Jullundur Town (*Jālandhar*).—Head-quarters of the Division and District of Jullundur, Punjab, situated in $31^{\circ} 20'$ N. and $75^{\circ} 35'$ E., on the North-Western Railway and grand trunk road. It is distant by rail from Calcutta 1,180 miles, from Bombay 1,247 miles, and from Karāchi 916 miles. Population (1901), including cantonments, 67,735, of whom 24,715 were Hindus, 40,081 Muhanmadans, 901 Sikhs, and 1,543 Christians. Jullundur was, when visited by Hiuen Tsiang, a large city, 2 miles in circuit, the capital of a Rājput kingdom. It was taken by Ibrāhīm Shāh of Ghor about 1088. Under the Mughals Jullundur was the capital of a *sarkār*; it was burnt by the Sikhs in 1757, and captured by the Faizullahpuria confederacy in 1766. Ranjīt Singh annexed it in 1811, and in 1846 Jullundur became the head-quarters of the territory acquired by the British after the first Sikh War. The town is surrounded by several suburbs known as *bastis*, the most important of which are Basti Dānishmandān (population, 2,770) and Basti Shaikh Darwesh (7,109), founded by Ansāri Shaikhs from Kāniguram in the seventeenth century. The town contains two flour-mills, to one of which is attached a small iron and brass foundry. The number of hands employed in 1904 was 73. Silk is also manufactured, and good carpenter's work is turned out. The municipality was created in 1867. The income during the ten years ending 1902-3 averaged Rs. 70,600, and the expenditure Rs. 68,800. In 1903-4 the income amounted to Rs. 84,300, chiefly from octroi; and the expenditure to Rs. 86,900, the main items being public health (Rs. 32,300) and

administration (Rs. 28,600). The chief educational institutions are four Anglo-vernacular high schools, maintained by the municipality, the Presbyterian Mission, and the two rival branches of the Arya Samāj. There is also a civil hospital.

The cantonment, established in 1846, lies 4 miles to the south-east of the town. Population (1901), 13,280. The garrison usually consists of two batteries of field artillery, one battalion of British infantry, one regiment of Native cavalry, and a battalion of Native infantry, with a regimental dépôt. The income and expenditure from cantonment funds during the ten years ending 1902-3 averaged Rs. 40,000 and Rs. 41,000 respectively. There is an aided Anglo-vernacular high school.

Jumkha.—Petty State in REWĀ KĀNTHA, Bombay.

Jummoo.—Province and town in Kashmīr State. *See* KASHMĪR AND JAMMU and JAMMU TOWN.

Jumna (*Yamuna*; the *Diamouna* of Ptolemy, *Jomanes* of Pliny, and *Jobares* of Arrian).—A great river of Northern India. Rising in the Tehri State ($31^{\circ} 1' N.$, $78^{\circ} 27' E.$), eight miles west of the lofty mountain Bandarpūnch (20,731 feet), it flows past the sacred shrine of Jamnotrī, and winds through the Outer Himālayas for 80 miles, receiving a few small streams. At the point where it passes into the Dūn, the valley between the Himālayas and the Siwālīks, it receives the TONS, which is there the larger stream. Its course now runs south-west for 22 miles, dividing the Kiarda Dūn (Punjab) from Dehra Dūn (United Provinces); two large affluents, the Giri from Sirmūr on the west and the Asan from Dehra on the east, join it here. The Jumna pierces the Siwālīks 95 miles from its source, at Khārā, and divides Ambāla and Karnāl Districts in the Punjab from Sahāranpur and Muzaffarnagar in the United Provinces. It is a large river at Faizābād, where it gives off the WESTERN and EASTERN JUMNA CANALS. Near Bidhaurī in Muzaffarnagar it turns due south, and runs in that direction for 80 miles, dividing Meerut District from the Punjab, till it reaches Delhi. Ten miles below Delhi it gives off the AGRA CANAL from its western bank at Okhla. It then turns south-east for 27 miles to Dankaur, when it again resumes a southerly course. In this portion it receives on the east the Kotha Nadi and the HINDAN, and on the west the Sabī Nadi. Below Delhi the river forms the boundary between Gurgaon District in the Punjab and Bulandshahr and Aligarh Districts in the United Provinces. It then enters Muttra and, crossing it, turns east till the borders of Agra are reached. Throughout its course in this District, where it receives the BĀNGANGĀ, and also in Etāwah, it winds in a remarkable manner, its bed lying between high banks which are furrowed by steep ravines. Just before Jālaun District is reached the great river CHAMBAL from Rājputāna joins it; and the Jumna then divides the three Districts of Cawnpore, Fatehpur, and Allahābād from

Jālaun, Hamīrpur, and Bāndā. In Cawnpore District the Sengar, and in Fatehpur the Non and Rind, flow into it; close to Hamīrpur it receives the BĒTWĀ, and in Bāndā District the KĒN. It finally falls into the GANGES below Allahābād, 860 miles from its source.

The Jumna, after issuing from the hills, has a longer course in the United Provinces than the Ganges; but it is not so large or important a river, and does not carry as much water as is required by the canals taken from it. The supply is therefore increased from the Ganges by means of the cut into the HINDAN; and the Irrigation Commission (1901) recently proposed to make more water from the Ganges available by increasing the supply of the Lower Ganges Canal through a cut from the SĀRDĀ. The Jumna supplies drinking-water to the cities of Agra and Allahābād, which possesses, when fresh, special virtue in destroying the enteric microbe. It is crossed by railway bridges near Sarsāwā in Sahāranpur, at Delhi, Muttra, Agra, Kālpi (2,626 feet in width), and Allahābād (3,230 feet). The breadth of water-surface in the dry season varies from 2,600 feet at Okhla and 1,500 feet at Kālpi to 2,200 feet at Allahābād. The discharge in flood at Okhla is about 41,000 cubic feet per second, but this dwindles away to less than 200 in the dry season. The Jumna drains a total area of about 118,000 square miles.

The traffic on the Jumna was formerly of some importance, and large sums were spent in clearing away reefs of *kankar* (nodular limestone) and conglomerate in Etāwah District. Before the opening of the East Indian Railway, much cotton grown in Bundelkhand was sent down the river from Kālpi. At present timber is carried down the upper portion, and stone and grain in the lower courses. The principal towns on or near its bank are: Delhi in the Punjab; and Bāghpat, Māt, Brindāban, Muttra, Mahāban, Agra, Firozābād, Batesar, Etāwah, Kālpi, Hamīrpur, and Allahābād in the United Provinces.

Jumna Canal, Eastern.—An important irrigation work in the Upper DOĀB of the United Provinces, taking off from the left or eastern bank of the Jumna. The canal is drawn from a branch of the river which divides soon after piercing the Siwālīks. The bed at this point has a rapid slope over boulders and shingle, and the supply is easily maintained by spurs. For some miles the canal itself flows over a similar bed. The main channel is 129 miles long, and there are 729 miles of distributaries and 447 of drains. Immediately after the British occupation of the Doāb, recurring famines pointed to the urgent necessity for irrigation, and surveys commenced in 1809, but work was not begun till 1823. Funds were limited, and the canal was first opened in January, 1830. Sir Proby Cautley's experience on this canal was of great assistance in carrying out the magnificent works of the more important Upper Ganges Canal. The line followed kept closely to that of an old canal of the seventeenth century. It has been

much improved since it was opened, by providing falls (which also supply power for flour-mills) to lessen the slope, and by straightening the channel.

The capital cost at the end of 1830-1 amounted to little more than 4 lakhs, which had increased to 46 lakhs by the end of 1903-4. The canal serves a rich tract in the Districts of Sahāranpur, Muzaffarnagar, and Meerut, lying between the Hindan and Jumna, and falls into the latter river a little below Delhi. It commands an area of 906,000 acres, and in 1903-4 irrigated 305,000 acres. The gross revenue has exceeded working expenses in every year except during the Mutiny; and the net profits are usually high, amounting to 9.9 lakhs or 22 per cent. on the capital outlay in 1903-4, while the gross profits were 14.5 lakhs. Since 1837-8 the canal has not been used for navigation.

Jumna Canal, Western.—An important perennial irrigation work in the Punjab, taking off from the west bank of the Jumna, and irrigating Ambāla, Karnāl, Hissār, Rohtak, and Delhi Districts, and parts of the Native States of Patialā and Jīnd. It is by far the oldest of the great canals in the Province, and originated in 1356, when Fīroz Shāh III utilized the torrent-bed now known as the Chautang to conduct water to the royal gardens at Hissār and Hānsi. This was little more than a monsoon supply-channel, and after about a hundred years water ceased to flow farther than the lands of Kaithal. In 1568 the emperor Akbar re-excavated the work of Fīroz Shāh, and brought a supply from the Jumna and the Somb into the Chautang, and so on to Hānsi and Hissār. This was undoubtedly a perennial canal, as is testified by the ancient bridges at Karnāl and Safidon, and the complete set of water-courses with which the canal was provided, besides the original *sanad* or working-plan of the canal which is still in existence and promises a supply of water all the year round. A yet more ambitious scheme was undertaken in 1626 by Alī Mardān Khān, the engineer of the emperor Shāh Jahān. The river supply in the western branch of the Jumna was dammed up annually about 14 miles below the present head-works of the canal, and the water led along the drainage line at the foot of the high land through Pānīpat and Sonapat to Delhi. Drainages and escapes were fairly well provided for; and the Pulchaddar aqueduct, which took the canal across the Najafgarh *jhi* drain near Delhi, was, for the time, a great engineering feat, and was retained, with slight modifications, when the branch was reopened in 1819. The net revenue from the canal was reckoned equal to the maintenance of 12,000 horse. With the decay of the Delhi empire the upkeep of the canal was no longer attended to: water ceased to reach Hānsi and Hissār in 1707, the flow on Fīroz Shāh's line at Safidon stopped in 1720, and the Delhi branch ceased to flow in 1753-60. The Delhi branch was reopened in 1819, and the Hānsi branch in 1825. The alignment of the canal was, however, by no means satisfactory; and as early as 1846 it was noticed

that the concentrated irrigation, the defective drainage, and the high banks which cut off the flow of the natural drainage of the country, all contributed to rapid deterioration of the soil and decline in health of the people. Saline efflorescence was rapidly spreading, and the inhabitants of the waterlogged area were affected with chronic disorders of the liver and spleen. Between 1870 and 1882 various remodelling schemes were sanctioned, with the object of securing increased control over the supply and its distribution, greater facilities for navigation, and improved drainage; and these have resulted in the complete disappearance of the swamps and accumulations of water, and a most marked improvement in the health of the people. The Sirsa branch was sanctioned in 1888, and this and subsequent minor extensions have largely increased the irrigating capacity of the canal. No less than 200,000 acres were rendered secure in 1896-7 by the Sirsa branch alone.

The head of the canal is at Tajewāla in Ambāla District, in $30^{\circ} 17' N.$ and $77^{\circ} 37' E.$, about $1\frac{1}{2}$ miles from the point where the river emerges from the lower hills. The river is here crossed by a weir 1,700 feet in length, flanked at each end by a scouring sluice and head regulator for the Eastern Jumna Canal on the left bank and for the Western Jumna Canal on the right, the full capacities authorized being respectively 1,300 and 6,380 cubic feet per second. The Western Jumna Canal has thus a maximum discharge more than three times that of the average flow of the Thames at Teddington. For the first 14 miles of its course the canal runs almost entirely in the old west branch of the Jumna river. It then effects a junction with the Somb river, a masonry dam across which holds up the combined streams and forces them into the canal head at Dādūpur, which is provided with a regulator and a rapid a short distance below. After a farther course of about 38 miles, chiefly in natural channels, there is at Indri a regulator with a lock and escape head, where the canal divides into the Sirsa branch and the new main line. The Sirsa branch has a capacity of 2,000 cubic feet per second, and runs for 115 miles, watering the arid tract of country between Indri and Sirsa. Some 31 miles farther on, the main line bifurcates into the Hānsi and new Delhi branches. The Hānsi branch has a length of 47 miles and a discharge of nearly 2,000 cubic feet per second, and gives off the Būtāna branch with a capacity of 700 cubic feet per second. The new Delhi branch has a capacity of 1,750 cubic feet per second and a length of 74 miles to the point where it meets the Okhla navigation canal at Delhi. The total length of main canal and branches is 343 miles, of distributaries (major and minor) 1,797 miles, of drainage cuts 657 miles, of escapes 76 miles, and of mill channels 9 miles. The total area commanded by the canal is 4,000 square miles, of which 3,300 square miles are cultivable. The average

area of crops irrigated during the twenty years ending 1894-5 was 529 square miles, which rose in the four years ending 1903-4 to an average of 944 square miles; and the work is estimated to irrigate altogether 1,259 square miles. The capital outlay to the end of March, 1904 (excluding a contribution of $11\frac{1}{2}$ lakhs from the Patiala State), was 172.7 lakhs. The gross revenue for the three years ending March, 1904, averaged 23 lakhs, and the net revenue, after paying all interest charges and working expenses, 7.6 lakhs, or 4.4 per cent. on the capital outlay. The main line and the new Delhi branch are navigable from the head-works to Delhi. The Hānsi branch is navigable to where it meets the Southern Punjab Railway at Hānsi. The expenditure on the provision for navigation is estimated at 16 lakhs; and, although near Delhi there is a certain amount of boat traffic, and timber is largely rafted down the canal, this large expenditure has proved hitherto a financial loss, and the combination of navigation with irrigation a failure. There are flour-mills at several of the falls; but the flour and the other mills at Delhi, which at one time were worked advantageously, are now closed, the water being too valuable to be used for this purpose.

Junāgarh State.—Native State in the Kāthiāwār Political Agency, Bombay, lying between $20^{\circ} 44'$ and $21^{\circ} 53'$ N. and 70° and 72° E., with an area of 3,284 square miles. It is bounded on the north by Barda and Hālār, on the east by Gohelwār, and on the west and south by the Arabian Sea. The only elevation rising above the general level of the plains is the Girnār group of hills, the highest peak of which, Gorakhnāth, is about 3,666 feet above sea-level. All the hills are volcanic and consist of trap and basalt, but the summit of the Girnār is composed of syenite. The principal rivers are the Bhādar and the Saraswatī. The Bhādar is the largest river in the State, and much irrigation is carried on along its banks and those of its tributaries. The Saraswatī, or sacred river of Prabhās Pātan, is famous in the sacred annals of the Hindus. There is also a densely wooded tract called the Gir, hilly in some parts, but in others so low as to be liable to floods during the rainy season. The climate is fairly healthy; but, except on the Girnār hill, the heat is excessive from the beginning of April to the middle of July. The annual rainfall averages 40 to 50 inches.

Until 1472, when it was conquered by Sultān Mahmūd Begara of Ahmadābād, Junāgarh was a Rājput State, ruled by chiefs of the Chudāsama tribe. During the reign of the emperor Akbar it became a dependency of Delhi, under the immediate authority of the Mughal viceroy of Gujarāt. About 1735, when the representative of the Mughals had lost his authority in Gujarāt, Sher Khān Bābi, a soldier of fortune, expelled the Mughal governor, and established his own

rule. Sher Khān's son Salābat Khān appointed his heir chief of Junāgarh, assigning to his younger sons the lands of Bāntwa. The ruler of Junāgarh first entered into engagements with the British Government in 1807. The chief bears the title of Nawāb, and is entitled to a salute of 11 guns. The present chief is tenth in succession from Sher Khān Bābi, the founder of the family. He holds a *sanad* guaranteeing any succession according to Muhammadan law, and the succession follows the rule of primogeniture. He was created a K.C.S.I. in 1899.

The population at the last four enumerations was: (1872) 380,921, (1881) 387,499, (1891) 484,190, and (1901) 395,428, dwelling in 7 towns and 811 villages. The decrease in the last decade (19 per cent.) was due to the famine of 1899-1900. Distributed according to religion, the population includes 301,773 Hindus, 85,684 Muhammadans, and 7,842 Jains. The capital is JUNĀGARH TOWN. Places of interest include the sacred mountain of GĪRNĀR, crowned with Jain temples; the port of VERĀVAL; and the ruined temple of SOMNĀTH.

The soil is generally black, with scattered tracts of the lighter kind. Irrigation is mainly from wells worked with the Persian wheel and the leathern bag. In 1903-4 the area of cultivated land was 859 square miles, of which 108 square miles were irrigated. Four stallions are maintained for horse-breeding. Agricultural products comprise cotton, shipped in considerable quantities from the port of Verāval to Bombay, wheat, the ordinary varieties of pulse and millet, oilseeds, and sugarcane, of both the indigenous and Mauritius varieties. The Gir district contains about 1,200 square miles of good forest. The principal trees are teak, black-wood, *jambu*, and *babul*, all of which are used for building purposes locally and are a source of revenue to the State. The forest, however, is not able to meet all the demands for building timber of the whole peninsula, as large quantities are imported by sea from the Malabar coast. Stone of good quality is obtainable for building.

The coast-line is well supplied with fair-weather harbours, suited for native craft, the chief being Verāval, Nawābandar, Sutrāpāra, and Māngrol. These ports supply grain, timber, and other necessities to the greater part of Sorath. The State has its own postal arrangements. The Bhavnagar-Gondal-Junāgarh-Porbandar Railway passes through the territory. The main roads are from Junāgarh town towards Jetpur and Dhorājī, and from Junāgarh to Verāval. The ordinary country tracks serve in the fair season for the passage of carts, pack-bullocks, and horses. Oil and coarse cotton cloth are the principal manufactures.

Junāgarh ranks as a first-class State in Kāthiāwār. The chief has power of life and death over his own people, the trial of British subjects

for capital offences requiring the previous permission of the Agent to the Governor. Though himself paying a tribute of Rs. 65,604 to the Gaikwār of Baroda and to the British Government, the Nawāb of Junāgarh receives contributions called *zortalbi*, amounting to Rs. 92,421, from a large number of chiefs in Kāthiāwār. This levy, which is collected and paid to the Nawāb by British officers of the Kāthiāwār Agency, is a relic of the days of Muhammadan supremacy. The gross revenue in 1903-4 was about 26½ lakhs, chiefly derived from land (19 lakhs). Junāgarh has a mint issuing coin which is current only in the State. The British rupee is also current. Revenue survey operations are in progress in the State, the total area surveyed up to 1904 being 2,612 square miles. The chief has entered into engagements to prohibit *sati*, and to exempt from duty vessels entering his ports through stress of weather. Of the eighteen municipalities, the largest is Junāgarh, with an income of about Rs. 18,000. The State maintains a military force of 161 men; of these 99 are Imperial Service Lancers, and the remaining 62 are also mounted men. The total strength of the police is 1,760 men, of whom 144 are mounted. There are 9 jails, with a daily average of 51 prisoners in 1903-4. Besides one Arts College attended by 181 students, the State contains one high school, and 124 other schools, with 8,800 pupils. The State maintains 21 medical institutions, including one hospital, which afforded relief to 121,000 persons in 1903-4. There is also a leper asylum containing 61 inmates. In the same year nearly 10,000 persons were vaccinated.

Junāgarh Town.—Capital of the State of the same name in Kāthiāwār, Bombay, situated in 21° 31' N. and 70° 36' E., 60 miles south-west of Rājkot. Population (1901), 34,251, including 17,248 Hindus, 15,911 Musalmāns, and 1,029 Jains. Junāgarh, situated under the Gīrnār and Dātār hills, is one of the most picturesque towns in India, while in antiquity and historical interest it yields to none. The Uparkot or old citadel contains interesting Buddhist caves, and the whole of the ditch and neighbourhood is honeycombed with caves or their remains. The most interesting of these, called Khāprākodia, have the appearance of having been once a monastery two or three storeys in height. Dr. Burgess, in his *Antiquities of Cutch and Kāthiāwār*, has fully described these caves. The ditch is cut entirely out of the rock and forms a strong defence. In the Uparkot are two *vāvs* or wells said to have been built by slave girls of Chudāsama rulers in olden times; a mosque built by Sultān Mahmūd Begara; near the mosque is a cannon 17 feet long, 7½ feet in circumference at the breech, and 9½ inches in diameter at the muzzle; another large cannon in the southern portion of the fort is 13 feet long and has a muzzle 14 inches in diameter. From the times of the Anhilvāda

kings the Uparkot has been many times besieged, and often taken, on which occasions the Rājā was wont to flee to the fort on Girnār, which from its inaccessibility was almost impregnable. Of late years several public buildings have been erected, and the town has been much improved by fine houses built by the nobles of the court. Among the public buildings may be mentioned a fine hospital, the Bahā-ud-dīn Arts College, a library and museum, the Reay Gate with a clock-tower, and a fine high school. A collection of shops called the Māhābat Circle is in front of the Nawāb's palace. Uparkot is the ancient Junāgarh; the present town is more correctly called Mustafābād, and was built by Mahmūd Begara of Gujarāt.

Junāpādar.—Petty State in KĀTHIĀWĀR, Bombay.

Jungle Mahāls.—A vague term applied in the eighteenth century to the British possessions and semi-independent chiefdoms in Bengal, lying between the regular Districts of Bīrbhūm, Burdwān, and Bānkurā, and the hill country of Chotā Nāgpur. As the administration became more precise, inconvenience arose from the vagueness of the jurisdiction; and by Regulation XVIII of 1805 the Jungle Mahāls were constituted into a distinctly defined District, consisting of 15 *parganas* or *mahāls* from Bīrbhūm District, 3 from Burdwān (including the greater part of Bishnupur), and 5 from Midnapore (including Mānbhūm and Barābhūm). The separate District of the Jungle Mahāls was abolished by Regulation XIII of 1833, and the territory redistributed among the adjoining Districts. The tract is now comprised within Bīrbhūm, the Santāl Pargāṇas, Bānkurā, Midnapore, and the eastern Districts of the Chotā Nāgpur Division, especially Mānbhūm.

Junnar Tāluka.—*Tāluka* of Poona District, Bombay, lying between 18° 59' and 19° 24' N. and 73° 38' and 74° 19' E., with an area of 591 square miles. It contains one town, JUNNAR (population, 9,675), the head-quarters, and 158 villages, including OTUR (6,392). The population in 1901 was 117,753, compared with 115,762 in 1891. The density, 199 persons per square mile, is above the District average. The demand for land revenue in 1903-4 was 2 lakhs, and for cesses Rs. 14,000. The chief range is that of Harischandragarh. Junnar consists chiefly of the two valleys of the Mina and the Kukdi. A small portion in the west is composed of high hills and rugged valleys. In the east the soil is either black, of variable depth, or a poor gravel. *Bājra* is the staple crop. The climate is dry and healthy, and free from hot winds. The annual rainfall averages 30 inches.

Junnar Town.—Head-quarters of the *tāluka* of the same name in Poona District, Bombay, situated in 19° 12' N. and 73° 53' E., 56 miles north of Poona city, and about 16 miles east of the crest of the Western Ghāts. Population (1901), 9,675. The fort of Junnar, often noticed in Marāthā annals, was built by Malik-ut-Tujār in 1436.

In May, 1657, Sivaji surprised and plundered the town, carrying off about 10 lakhs in specie, besides other valuable spoil. About $1\frac{1}{2}$ miles south-west of the town is the hill fort of Shivner, granted in 1599 to the grandfather of Sivaji; the latter is said to have been born here in 1627. During the turbulent times of Marāthā warfare Shivner was often taken and retaken, and once, in 1670, the forces of Sivaji himself were beaten back by its Mughal garrison. Besides fine gates and solid fortifications, it is celebrated for its deep springs. They rise in pools of great depth, supposed to be coeval with the series of Buddhist caves which pierce the lower portion of the scarp. The chief buildings of interest in Junnar are the Jāma Masjid, five hundred years old, a mosque dating from the time of Shāh Jahān, the Afiz Bāgh, and two fine *dargāhs*. The hills surrounding the plain of Junnar are honey-combed with Buddhist caves, many of them of striking interest. Chief of these is a circular cave situated in a hill beyond Shivner. Some bear traces of fine carving, and there are a few inscriptions dating back to the first century of the Christian era. Junnar is supposed to have been a town of great importance in the days of the Western Kshatrapas. (See BOMBAY PRESIDENCY, History.) The municipality, which was established in 1861, had an average income during the decade ending 1901 of Rs. 8,800. In 1903-4 the income was Rs. 13,000, chiefly derived from octroi and a tax on houses and lands. Though fallen in size and importance since the time of Muhammadan rule, and by the subsequent transfer of the seat of government to Poona under the Marāthās, Junnar is still a place of considerable note. It is the chief market of the northern part of the District, and a *dépôt* for the grain and merchandise passing to the Konkan by the Nāna *ghāt*. It has a high school and nine other schools, attended by 824 boys and 152 girls, a dispensary, and a Subordinate Judge's court. It was formerly celebrated for the manufacture of paper, but the low rates at which the European article is now sold have almost driven native paper out of the market. A branch of the Church Missionary Society is stationed here.

Jutogh.—Hill cantonment in Simla District, Punjab, situated in $31^{\circ} 7' N.$ and $77^{\circ} 7' E.$, about a mile from the western extremity of the station of Simla. The land was acquired from Patiāla in 1843. During the summer months one battery of British mountain artillery and two companies of the regiment quartered at Sabāthu are stationed here. Population (March, 1901), 375.

Kabbāldurga.—Fortified conical hill in the Malavalli *tālūk* of Mysore District, Mysore, situated in $12^{\circ} 30' N.$ and $77^{\circ} 18' E.$, 3,507 feet high. The sides are very precipitous, and the summit is accessible only on one side, where some notches are cut in the solid rock. It was a penal settlement for state prisoners under the Hindu and Musal-

mān dynasties. The poisonous water and noxious climate, aided by unwholesome food, soon ended the lives of the victims confined in it. The unfortunate Chāma Rājā and his wife were sent here by the Dalavāyi Devarāj in 1734, and Morāri Rao, the Marāthā chief of Gooty, by Haidar Alī, who gave the place the name of Jāfarābād. In 1864 the guns were destroyed and the guards removed.

Kabbani (also called Kapini or Kapila).—An important tributary of the Cauvery. It rises on the Western Ghāts in North Wynaad, and enters Mysore at the south-west corner of Mysore District. Running north-east with a very winding course through the Heggadadevankote *tāluk* to near Belatūr, it there turns east, and receiving the Nugu and (at Nanjangūd) the Gundal, both from the south, joins the Cauvery at Tirumakūdal Narsipur, the confluence being esteemed a spot of great sanctity. The Kabbani is a fine perennial river, 150 to 200 yards wide, and has a total course of about 150 miles, of which 120 are in Mysore. The Rāmpur channel, 32 miles long, drawn from it, irrigates nearly 1,400 acres.

Kabīrwāla.—Northernmost *tahsīl* of Multān District, Punjab, lying between 30° 5' and 30° 45' N. and 71° 35' and 72° 36' E., with an area of 1,603 square miles. The population in 1901 was 130,507, compared with 113,412 in 1891. It contains the town of TALAMBA (population, 2,526) and 320 villages, including Kabīrwāla, the head-quarters. The land revenue and cesses in 1903-4 amounted to 5·2 lakhs. The Rāvi runs through the northern portion of the *tahsīl* to its junction with the Chenāb in the north-west corner. The north and west portions are irrigated by the Sidhnai Canal, while the south consists of uncultivated Bār jungle.

Kābul Province.—The central and most important province of Afghānistān, bounded on the north by Afghān-Turkistān, on the east by the district of Jalālābād, and on the south and west by the provinces of Kandahār and Herāt. The general elevation is probably not less than 7,000 feet, while a considerable portion of the province consists of a region of lofty mountains. It is crossed in the north by the Hindu Kush. The Band-i-Bāba and the Paghmān form a great watershed in its centre, dividing the upper reaches of the Kābul, Helmand, and Hari Rūd rivers. The lofty highlands of the Hazārajāt form its south-western districts, and in the south and south-east are the uplands of Ghazni.

The northern districts of the province are Kohistān, Panjshir, Bāmiān, Saighān, and Nijrao. These are peopled by Kohistānis and Tājiks, while in Bāmiān Hazāras are also numerous. Its western and south-western districts are those of the Hazārajāt, including the country of the Besūd, the Deh Zangi, and the Deh Kundī tribes of Hazāras. In the south and south-east lie Ghazni, Gardesh, Khost, and Logar.

The predominant inhabitants of these districts are Ghilzais and other Afghān tribes, but Hazāras and Tājiks are also to be found.

The winters are extremely rigorous ; but the spring, summer, and autumn are, with the exception of July and August, quite European in character.

There are numerous evidences of Persian, Greek, Hindu, Buddhist, and Muhammadan antiquities in the Province. The Surkh Minār, near Kābul city, is no doubt a copy of the capitals of Persepolitan pillars, while Greek influence is evident in the Buddhist monasteries and *stūpas* found along the Kābul valley. The valley is also rich in Graeco-Bactrian coins. In the Koh-i-Dāman, north of Kābul, are the sites of several ancient cities, the greatest of which, called Beghrām, has furnished thousands of coins, and has been supposed to represent Alexander's *Nicaea*. Investigations at Jalālābād during the late Afghān campaign resulted in the recovery of many interesting sculptures in stone, slate, and plaster. Among the most remarkable relics of a bygone age are the colossal figures carved in the cliff at Bāmiān, north of the Koh-i-Bāba, and the adjoining caves. The largest of these figures is 180 feet high. Authorities differ as to their origin, but it seems most probable that they are Buddhist. The surrounding caves answer to the requirements of a Buddhist monastery, and close to the foot of the cliff is a mound resembling a Buddhist *stūpa*, the exploration of which may some day put the question at rest.

For history, trade, and industries see AFGHĀNISTĀN and KĀBUL CITY.

Kābul City.—Capital of Afghānistān, situated in 34° 30' N. and 69° 13' E., on the right bank of the Kābul river, a short distance above its junction with the Logar, 181 miles from Peshāwar ; 5,780 feet above the sea. North of the city, on the left bank of the river, stand the suburbs of Deh-i-Murād Khāni, Andarābai, and Deh-i-Afghān ; and beyond those is the military cantonment of Sherpur, backed by the Bemāru hill. To the south-east are the Sher Darwāza heights, to the south the Bāla Hissār, and to the east the Siāh Sang ridge. On the west the Kābul river flows through the gorge formed by the Asmai and Sher Darwāza hills. The number of inhabitants is probably nearly 150,000, of whom 100,000 are Kābulis, 3,000 Durrānis, 12,000 Tājiks, 6,500 Kizilbāshis, and 4,000 Hindus. The city is 3½ miles in circumference and is no longer walled, although traces of a wall remain.

Kābul, though by far the richest city in the Amīr's dominions, contains no external or internal evidences of grandeur. The older houses are built of burnt bricks ; the more modern ones of sun-dried bricks and mud. Originally there were seven great gates ; now only one remains, the Darwāza-i-Lāhauri, on the eastern face. The city is divided into quarters (*muhallas*) and streets (*kūchās*). The principal streets are the

Shor Bāzār and the Chār Chatta : they are badly paved, undrained, and exceedingly dirty. The Shor Bāzār extends from the Bāla Hissār to the Ziārat-i-Bāba Khudi, a distance of about three-quarters of a mile. The Chār Chatta consists of four covered arcades at the western end of the street leading from the Darwāza-i-Lāhauri. It was destroyed by Pollock in 1842, but restored by Amīr Dost Muhammad in 1850. Here are shops tenanted by silk-mercers, jewellers, furriers, cap- and shoemakers, fruiterers, and money-changers, all doing a thriving business. The Kizilbāshis live in the separate walled quarter of Chandaul, by the mouth of the Deh Mozang gorge. A row of fine new shops, called Bāzār-i-Nao, has recently been built on the north side of the river, near the Darwāza-i-Ark.

The climate of Kābul is, on the whole, healthy. The great lake of Wazīrābād beyond the Sherpur cantonment has been drained and is now dry ; but the marshes between the Bāla Hissār and Beni Hissār give rise to malaria and fevers. The city itself, wedged in between two hills, with its confined streets, want of drainage, and absence of all sanitary arrangements, would seem to labour under strong disadvantages. Nevertheless, there are compensations in an excellent water-supply, a fine atmosphere, and delightful environs ; and the death-rate is probably lower than in most Afghān towns. Provisions are abundant and cheap. In ordinary years, barley sells at $22\frac{1}{2}$ seers per British rupee (about 34 lb. for a shilling), wheat at 18 seers, and flour at 16 seers.

Kābul is believed to be the *Ortospanum* or *Ortospana* of Alexander's march. It was attacked by the Arabs as early as the thirty-fifth year of the Hijra, but it was long before the Muhammadans effected any lasting settlement. Kābul first became a capital when Bābar made himself master of it in 1504, and here he reigned for twenty years before his invasion of Hindustān. It passed on the death of Bābar to his younger son, Kāmrān, who, after several attacks on his brother Humāyūn, was defeated and blinded by him (1553). Humāyūn left it to his infant son, Mirza Hākīm, on whose death, in 1585, it passed to the latter's elder brother, Akbar. From this time up to its capture by Nādir Shāh (1738), it was held by the Mughal emperors of India. From Nādir Shāh it passed to Ahmad Shāh Durrāni, whose son, Timūr, made it the capital of his kingdom. It continued to be the capital during the Sadozai dynasty, and is so still under the now reigning Bārakzais.

The city played an important part in the first Afghān War. In August, 1839, Shāh Shujā entered Kābul as king, escorted by a British army. Throughout that year and the next, the British troops remained without molestation, but in November, 1841, the citizens and Afghān soldiery broke out in rebellion and murdered Sir Alexander Burnes.

In December Sir William Macnaghten, our special Envoy, was treacherously shot by Akbar Khān, a son of Dost Muhammad, at an interview which had been convened to arrange for the withdrawal of the garrison. On January 6, 1842, the British forces marched out under a solemn guarantee of protection—4,500 fighting men, with 12,000 followers. Their fate is well-known: of all that number, only a single man, Dr. Brydon, reached Jalālābād, and ninety-two prisoners were subsequently recovered. Shāh Shujā was assassinated in April, four months after the withdrawal of the British troops. In September, 1842, General Pollock, with the army of retribution, arrived at Kābul, and took possession of the citadel without opposition. Previous to his departure a month later, the great bazar was destroyed by gunpowder, as a retribution for the murder of Sir William Macnaghten.

Kābul was again occupied by British troops in 1879, when an avenging force under General (now Lord) Roberts was sent to exact punishment for the massacre of the British Resident, Sir Louis Cavaignari, and his party, which took place in September of that year. The city remained in British occupation for nearly a year. During the winter the tribesmen rose in large numbers, and, after heavy fighting for several days, the British troops were compelled to concentrate in the Sherpur cantonment, which remained closely invested by at least 50,000 men. A determined attack was beaten off on December 23, 1879; and, on the following day, an additional brigade having arrived and joined General Roberts, the city again passed into his hands, the tribesmen melting away as suddenly as they had appeared. In August, 1880, the British forces evacuated Kābul and returned to India, on the recognition of Abdur Rahmān Khān as Amīr.

Kābul does not possess many edifices of antiquarian interest. The four principal mosques at the present time are the Masjid-i-Safed, built by Timūr Shāh Sadozai; the Masjid-i-Bāla Chaok, by Bābar; the Masjid-i-Pul-i-Khishti, by Shāh Shujā; and the large Jāma Masjid, by the late Amīr. Outside the city are the tombs of Bābar and Timūr Shāh. The surroundings of Bābar's tomb have been converted into a garden, beautifully laid out and encircled by a mud wall 30 feet high. It contains a prettily built summer-house. At Indaki, three miles away, overlooking the Chahārdch valley, is another charming summer residence and garden; and on the slopes of a hill between Shāh Mardān and Wazīrābād is yet another, known as the Bāgh-i-Bāla. All these country residences and several others were built in the reign of the late Amīr, and are not the least among the many improvements which he effected.

The old residence of the Amīrs used to be in the Bāla Hissār, but Abdur Rahmān Khān constructed a new fortified palace for himself, described below. The lower Bāla Hissār has been completely

dismantled ; the old Residency, the scene of the deplorable outbreak where the gallant Cavagnari, all his British officers, and most of his escort met their death in September, 1879, has almost entirely disappeared ; and in 1893 the only building inside was Sher Ali Khān's palace, a mere shell, on the eastern wall. In the upper Bāla Hissār, just beyond the Residency site, and under the wall of the citadel, an arsenal and extensive storehouses for grain have been constructed.

The new fortified palace (or Ark as it is locally called) is situated in extensive grounds, not less than three-quarters of a mile by half a mile, between Alamganj and Sherpur. It occupied five years in building, and cost about 20 lakhs of rupees. A considerable portion of the grounds is laid out in fruit and flower gardens. There are two gateways, one facing Alamganj and the other looking east towards Siāh Sang. The fortified Ark is surrounded by a moat. It is a massive structure about 350 yards square ; the width of the ditch is not less than 60 feet at the top.

The works of improvement carried out at Kābul by Abdur Rahmān Khān were by no means limited to the construction of palaces and summer gardens for his personal gratification. He showed a remarkable interest in the development of numerous branches of industry ; and the extensive workshops established by him, under European supervision, are a lasting monument to his name. When one remembers that on Abdur Rahmān's accession, and indeed for nearly ten years later, steam power was unknown throughout Afghānistān, what was accomplished during the second decade of his reign is indeed surprising. On the left bank of the Kābul river, and right in the Deh Mozang gorge, there are now workshops whose out-turn, all circumstances considered, comes up to European standards. The *raison d'être* of these shops is the manufacture of war material, but other handicrafts are also practised. One large shop, for instance, is entirely occupied by men engaged in leather work—boots, saddles, and equipment for the army ; another is occupied by steam saw-mills and carpenters ; a soap factory turns out 12 tons of soap in a week ; candles are manufactured ; a mint worked by steam coins 40,000 Kābuli rupees a day ; and constant labour is found for skilled workers in silver and brass. In 1893 five steam engines were used in the shops ; others are believed to have been imported since. The initiation of this great undertaking was due to the late Amīr, with Sir Salter Pyne as his principal lieutenant. At one time, in 1892, no less than fourteen Europeans were at Kābul in the Amīr's employ, among them a doctor, a geologist, a mining engineer, a gardener, a veterinary surgeon, a tailor, a lapidary, a tanner, and a currier. In 1904 there were only two Europeans at Kābul—a gunsmith and an electrical engineer. About 1,500 men are employed in the shops, the majority being

Kābulis who have learnt their work from English mechanical engineers and Punjābi artisans, and are now thoroughly efficient.

There is no occasion to describe in detail the fortifications of Kābul. Those left by the British forces on their withdrawal in August, 1880, are kept in repair; and the cantonment of Sherpur, which afforded accommodation for most of the British force, is now occupied by the Afghān garrison.

There are five bridges across the river at Kābul, one of which (now broken) was built by the emperor Bābar, and another by Shāh Jahān.

Besides the large trade in local products necessary to meet the requirements of the city population, Kābul is credited in the trade statistics for 1903-4 with imports from India to the value of 50 lakhs of rupees, and with exports aggregating nearly 29 lakhs: that is to say, with more than half the entire trade between Afghānistān and British India. The principal imports are British and Indian cotton twist and yarn, piece-goods, manufactured leather, hardware, indigo, sugar, tea, and spices. The principal exports are fresh and dried fruits, asafoetida and other drugs, and furs.

Kābul has attained an enviable reputation for its practically unlimited supply of fruit. Throughout the Kābul valley orchards extend for miles, and hardly a country house is without its large walled garden. The grape here grows to great perfection, the vines never having suffered from the phylloxera of Southern Europe. All the known European fruits, such as the apple, pear, quince, plum, apricot, peach, cherry, mulberry, are found in abundance; and a variety of melon, known as the *sarda*, which is said to grow only in the Kābul district, is exported to every part of India.

Kābul River.—River of North-Western India, which rises in Afghānistān near the Unai Pass, about 40 miles west of Kābul city, in $34^{\circ} 21' N.$ and $68^{\circ} 20' E.$ In its upper course it is joined by many small tributaries from the southern slopes of the Laghmān range. It is at first an inconsiderable stream, being fordable as far as Kābul city. At a short distance beyond this it receives the Logar from the south, and thenceforward becomes a rapid river with a considerable volume of water. About 40 miles below Kābul city it receives from the north the Panjshīr; 15 miles farther on the Tagao; 20 miles below, the united streams of the Alingār and Alishang; and a few miles above Jalālābād, the Surkhāb from the south. Just below Jalālābād it is joined by the Kunar from the north. After these accessions, the Kābul becomes a large river, nowhere fordable. Flowing with great force, it hugs the north side of the Jalālābād valley until it enters the Mohmand Hills, when it presses towards the north base of the Khyber range, and is confined between hills until it enters British territory

near Michni Fort. Here it divides into two branches, the Adezai on the north and the Nagūmān on the south.

The Adezai, or Hājizai, is at present the main stream. It divides the *tahsils* of Peshāwar and Chārsadda for 20 miles, and, after a further course of 10 miles through the latter *tahsil*, rejoins the Nagūmān at Nisatta, after receiving the waters of the Swāt. The Nagūmān, formerly the main stream, throws off the Budhni, a small branch which supplies the Jui Shaikh canal, and after receiving the drainage of the Khyber Hills, turns north and joins the Shāh Alam, itself a chord of the Nagūmān. That stream has a course of 20 miles before it reaches Nisatta, and below that place the joint stream is known as the Landai or 'short' river. The Landai flows between low banks for its first 12 miles, but below Naushahra it has cut a deep channel and its lower reaches are rocky. After a course of 36 miles it falls into the Indus at Attock. Thus the total course of the Kābul river is about 316 miles.

From its source to Jalālābād, the river is of no value except for irrigation, which it also affords in the Frontier Province (*see* KĀBUL RIVER CANAL); from Jalālābād to Dobandi, it affords safe, and generally rapid, descent down stream by means of rafts of inflated skins. This mode of travelling is frequently resorted to, as it saves ten marches which may be traversed in twelve hours when the river is in flood. The boatmen of Lālpura, Jalālābād, and Kunar are a peculiar race, keeping much to themselves, and are known under the generic title of *niḷābī*. From Dobandi (or Nisatta) to Attock, the Kābul is navigable for boats of 40 or 50 tons.

Between Kābul city and Jalālābād, the river is fordable in places; but after it has been swelled by the waters of the Logar, the fords are not always practicable; both at Sarobi (opposite Naglu) and at Jalālābād there are alternative fords and ferries. The precarious nature of the Jalālābād ford was illustrated by a catastrophe which occurred in March, 1879, when an officer and forty-six non-commissioned officers and men of the 10th Hussars were drowned while attempting a passage in the dark. The principal ferries between Dobandi and Attock are from Nisatta to Khalīl Bandah, and from New to Old Naushahra. The railway from Naushahra to Dargai crosses the river, and there is a bridge of boats at the same site, while another has recently been constructed at Lālpura below Jalālābād. Permanent bridges cross the river in Kābul city.

Kābul River Canal.—A perennial irrigation work in the Peshāwar District of the North-West Frontier Province. It is a revival of an old Mughal canal, and takes off from the right bank of the Kābul river at the village of Warsak on the border of British territory, about 3 miles up-stream from Michni Fort. The main line is 20 feet in width at the

off-take, and can carry more than 300 cubic feet a second. It crosses the watershed of the country, passing over thirty-six drainage channels of greater or less size, and running close to Peshāwar terminates at the fortieth mile near Naushahra. The distributaries include four branches, with a total length of 19 miles, the largest being the Kuror branch, $9\frac{1}{2}$ miles long. A small private canal is situated near the canal head. The tract commanded is a long narrow strip of irregular width, bounded on the south and west by the canal itself, and on the north and east, for the upper two-thirds of its length, by the low-lying ground irrigated by old proprietary canals, of which the Jui Shaikh is the most important; while for the lower third of its length the Kābul river is the boundary.

The area now commanded exceeds 30,000 acres. It is at present considerably interspersed with that irrigated by the Jui Shaikh and other private canals, as well as by the Bārā river works; but there seems every prospect of the greater portion of all this area ultimately coming under the canal. Irrigation is chiefly for the autumn harvest, and the area of crops actually irrigated during the three years ending 1902 averaged 30,173 acres; in 1903-4 it was 27,800 acres. The canal was opened in 1893, the Kuror branch being added subsequently. The capital cost up to March, 1904, was Rs. 6,45,000, and the net income in 1903-4 was Rs. 90,800, giving a return of nearly 24 per cent. On October 1, 1903, the revenue management of this canal was taken over by the Irrigation department. An extension called the Hazār Khāni branch is now under construction.

Kachch.—State in Bombay. *See* Cutch.

Kachhi.—Division of the Kalāt State, Baluchistān, lying between $27^{\circ} 53'$ and $29^{\circ} 35'$ N. and $67^{\circ} 11'$ and $68^{\circ} 28'$ E. It consists of a flat triangular plain, 5,310 square miles in area, with its base on the Upper Sind Frontier District of Sind, and is enclosed by the Marri and Bugti hills on the east, and by the Kīrthar and Central Brāhui ranges of the Jhalawān country on the west. On the north-east side of its apex lies the British *tahsil* of Sibi. The only hills, other than the skirts

Physical aspects. of the surrounding mountains, consist of the low range called Bannh, separating Dādhar on the north from the Bolān lands on the south. The principal rivers are the NĀRI, the Bolān, the Sukleji, and the MŪLA. Among the hill-torrents are the Dhoriri, formed by the junction of the Sain and Karu from the Jhalawān country, the Lahri, and the Chhatr. On entering Kachhi, all these rivers are dissipated into numberless natural channels, spreading over the great alluvial stretches of which the country is composed.

The geological structure of the country is uniform, consisting of a level bed of clay burnt by the rays of the sun and probably of great

depth. The outskirts of the surrounding hills are of the Siwālik formation. Except along the foot of the hills, the general aspect of the country is desolate and bare. The flora is thorny and scant, consisting of a stunted scrub. Among the trees occur *Prosopis spicigera*, *Salvadora oleoides*, *Capparis aphylla*, and two kinds of *Tamarix*. Common plants are *Calotropis procera* and many saltworts, such as *Haloxylon salicornicum*. Wild animals are scarce; a few 'ravine deer' (gazelle) and other small deer occur, and flocks of sand-grouse visit the cultivated areas in winter.

Situated in close proximity to Sind, Kachhi is one of the hottest areas in India. Scorching winds blow in the summer, and at times the deadly simoom (*luk*) prevails. Mosquitoes are so numerous that, at Gājān, a special portion of the crop has been assigned to a saint for his protection against them. From November to February the climatic conditions are pleasant, the air being crisp and cool. The annual rainfall averages about three inches, and usually occurs in July and August.

The history of Kachhi is intimately connected with that of Sind. In the seventh century Rai Chach took its capital Kandābil, probably Gandāva. To the Arabs the country was known as Nūdhā or Būdhā, and Kandābil was despoiled by them on several occasions. It afterwards passed into the hands of the Sūmras and Sammas of Sind. The fifteenth century saw the arrival of the Baloch and the conflicts between their two leaders, Mīr Chākar, the Rind, and Gwahrām Lāshāri. The Arghūns next took possession, and from them the country passed to the Mughals, and on the decline of the latter to the Kalhoras. In 1740 Nādir Shāh handed it over to the Brāhuis in compensation for the death of Mīr Abdullah, the Ahmadzai Khān of Kalāt, at the hands of the Kalhoras in the fierce battle of Jāndrihar near Sanni. From 1839 to 1842, during the first Afghān War, Kachhi was held and administered by the British on their lines of communication, and was the scene of much raiding and of two fights with the insurgent Brāhuis in 1840. After the war General John Jacob's cavalry was employed in checking the raiding propensities of the Kachhi tribesmen, especially the Jakrānis, who were subsequently removed to Sind. In the time of Mīr Khudādād Khān of Kalāt it was long a scene of anarchy and raiding, and at Bhāg in 1893 this ruler committed the crime in consequence of which he subsequently abdicated.

Buddhist remains have been discovered at Chhalgari and Tambu, and many of the mounds scattered through the country would probably repay excavation.

The number of villages is 606. The population (1901) is 82,909, the majority being Jats. Among important Baloch tribes are the

Rinds, Magassis, and Lāshāris; and among minor tribes, Buledis, Dombkis, Kaheris, and Umrānis. Roughly speaking the Magassis and

Population. Rinds occupy the west, and the Dombkis, Kaheris, and Umrānis the east; the Jats are found everywhere as cultivators. A few Brāhuis, such as the Raisānis and Garrāni Bangulzais, have permanently settled in the north of the country, and in the cold season it is visited by many other Brāhuis from the highlands. The occupation of nearly all the people is agriculture. Hindu traders are found in all important villages; the lower castes include potters, sweepers, blacksmiths, and weavers. The most common language is Sindī, but Western Punjābī and Baluchī are also spoken. Except the Hindu traders, all the people are Sunni Musalmāns. A sect called Taib ('penitents') has made some progress since 1890.

It is usual to speak of Kachhi as a desert, but this is a mistake. The soil is extremely fertile wherever it can be irrigated. Its quality depends on the admixture of sand. The best is

Agriculture. a light loam mixed with a moderate proportion of sand (*matl*). Except a fringe of 'wet-crop' area on the west, most of the land entirely depends for cultivation on floods brought down by the rivers from the surrounding hills, the water of which is raised to the surface by a system of large dams constructed in the beds of the rivers by the co-operation of the cultivators. A description of this interesting system is given in the paragraphs on Agriculture in the article on BALUCHISTĀN. The floods generally occur in July and August, but occasionally also in spring. Three crops are harvested during the year: *sānuwari*, *sarav*, and *arhāri*. The first is the principal crop, and is sown in July and August and reaped in the autumn. It consists of *jowār*, with a little *mūng*, *moth*, and *bājra*. The second, or spring crop, comprises wheat, barley, mustard, and rape; the third, *jowār* for fodder, cotton, and water-melons. Kachhi *jowār* is renowned for its excellence, and is usually cultivated on a soil known as *khauri*. Indigo is grown in Dādhar. The cultivation of the *sarav* crop is uncertain, depending on late floods in August. Dādhar, Sanni, Shorān, Gājān, Kunāra, part of Gandāva, and Jhal are the only places where irrigation from permanent sources exists.

Bullocks from Nāri in Kachhi are famous for their shape and strength, and many are purchased by dealers from the Punjab. Camels are bred in some numbers. The breed of horses is excellent. Branded mares number 604, and one stallion was located in the country in April, 1904. The best breeders are the Magassis, Dombkis, and Rinds. The indigenous sheep do not possess fat tails, but many of the fat-tailed variety, known as Khorāsāni, are brought from the highlands in winter. Of goats, the *barbari* breed is most prized.

No 'reserved' forests exist, but protective measures are adopted by

the tribal chiefs. The western side of the country contains some well-wooded tracts. A sulphur mine at Sanni was worked in pre-British days by the Amīrs of Afghānistān. Ferrous sulphate (*zāgh*) is found in the mountains near Kotra and Sanni. Earth-salt is manufactured by the lixiviation of salt-bearing earth at Gājān and Shorān. Saltpetre is produced in small quantities, and the manufacture of carbonate of soda (*khar*) from the numerous saltworts is increasing.

The principal industry is the weaving of coarse cotton cloth. Double coloured cotton sheets (*khes*) of good quality are produced here and there, while at Lahri and a few other places a fine kind of embroidered leather-work is manufactured. Country rifles, swords, and saddles are made at Bhāg and Dādhar.

Trade and communications.

Most of the trading class come from Shikārpur in Sind. The centres of trade are Dādhar, Lahri, Hāji, Bhāg, Shorān, Gājān, Kotra, Gandāva, and Jhal. Piece-goods, rice, sugar, and country carts are imported from Sind; dates, *ghī*, wool, and medicinal drugs from the highlands for re-export. Exports to the highlands include cotton cloth, mustard oil, salt, and silk; the articles supplied to Sind consist chiefly of carbonate of soda, grain, and oilseeds. The North-Western Railway passes through the centre of Kachhi. No metalled roads have been made, but the country is easily traversed in all directions except after heavy floods.

The principal routes run from Jacobābād to Sibi via Lahri on the east; through Shori and Bhāg in the centre; and via Gandāva and Shorān to Dādhar on the west. The route through the Mūla Pass from the Jhalawān country debouches at Gandāva.

The insignificant rainfall, the dependence of the country on flood-irrigation, and the absence of proper means of distributing the flood-water render Kachhi extremely liable to scarcity and even to famine. Under existing conditions enormous

Famine.

quantities of water run to waste in the Nāri in ordinary years, and the introduction of a good irrigation and distribution scheme would doubtless afford a large measure of protection. The proximity of Sind and the free migratory habits of the population have hitherto prevented the necessity of actual famine relief. Advances amounting to about Rs. 29,000 were made to the Khān of Kalāt's cultivators in 1900, when the drought, which had begun in 1897, culminated. They were recovered at the succeeding harvests.

For purposes of administration, Kachhi is divided into two parts: areas subject to the jurisdiction of the Khān of Kalāt, and areas under tribal chiefs. Within the areas subject to the Khān, however, tribal units are to be found which occupy a position of practical independence. The political control of the

Administration.

country east of the railway, i.e. the whole of the Lahri *niābat*, is vested in the Political Agent of Sibi District, and of the remainder in the Political Agent, Kalāt. The area under the Kalāt State is divided into five *niābats*: Dādhar; Bhāg; Lahri, which includes the area occupied by the Dombki, Kaheri, and Umrāni tribes; Gandāva; and Nasirābād. The head-quarters station of each *niābat* is located at a village of the same name, except Nasirābād, of which the head-quarters are situated at Mīrpur Bibiwāri. Dādhar, Bhāg combined with Lahri, and Gandāva with Nasirābād each forms the charge of a *mustaufi*, who is generally assisted by local officials known as *naib* and *jā-nashin*. Dādhar, however, possesses neither a *naib* nor a *jā-nashin*, and Gandāva has no *jā-nashin*. The principal areas subject to tribal control are Jhal, inhabited by the Magassis; and Shorān, held by the Rinds. In Lahri, the Dombkis, Kaheris, and Umrānis have acquired a large measure of independence. In the *niābats*, criminal, civil, and revenue cases are decided by the local officials; in tribal areas, petty cases are dealt with by the chief, and important or intertribal cases are referred to *jirgas* or local *kāzīs*, who exercise much influence, under the orders of the Political Agents. In the numerous *jāgirs* within the Khān's *niābats*, jurisdiction in all petty matters is exercised by the *jāgirdārs*. The most common offences are cattle-lifting and theft. Cattle are frequently stolen from Sind and sent to the Jhalawān country. Much use is made of trackers in the detection of such crimes, and some of these men are very skilful. They are paid by results.

The land revenue system presents an interesting survival of ancient native methods. The Khān collects revenue in his *niābats*, and elsewhere it is taken by tribal chiefs and *jāgirdārs*. It consists everywhere of a fixed share of the gross produce, varying from one-third to one-tenth, but generally one-third or one-fifth. The additional cesses (*rasūm*), however, raise the amount paid to one half. Irrigated lands sometimes pay a fixed cash assessment (*kalung*). Large *jāgirs*, originally granted for feudal service, are held by the Sarawān tribesmen in Bālā Nāri and the Bolān lands, and by the Jhalawān tribes round Gandāva and at Chhatr-Phuleji. The Dombki headman holds one in Lahri. Generally the proprietary right in all areas is held by the local cultivating class, but in the Baloch areas of Jhal and Shorān it has been transferred in many cases to the chiefs.

Besides the land revenue, contracts are given in the *niābats* for octroi, excise, and the collection of other minor taxes, the proceeds being included in the total revenue. The amount of land revenue proper varies with the extent and time of the floods in the rivers. Thus, in 1902 the Khān's aggregate revenue from all his *niābats* amounted to about 1 lakh, and in 1903 to more than 2½ lakhs; but in the latter year a new system of administration had been introduced.

The details of the latter sum are as follows: Dādhar, Rs. 49,200; Bhāg, Rs. 32,500; Lahri, Rs. 58,100; Gandāva, Rs. 55,400; Nasirābād, Rs. 56,600.

Tribal levies, paid by the British Government and numbering 50, are stationed at Dandor in Bālā Nāri, Lahri, Phuleji, and along the railway. Detachments, consisting of 85 of the Khān's infantry and 12 artillerymen, are located at Dādhar, Nasirābād, and Bhāg; but their numbers vary from time to time. The number of the Khān's irregular levies is generally 91. A tribal *thana* of five men is posted at Gandāva. Security is provided by the enlistment of *kotwāls*, who are paid either by the inhabitants or from the Khān's revenues. Tribal chiefs maintain retainers and dependants, who are employed on revenue duties and in securing the general peace. The same system is followed in the Khān's *niābats* by the local *naibs*, who distribute their friends and followers throughout the country at the expense of the cultivators. The Rind and Magassi chiefs receive allowances from the Khān of Kalāt of Rs. 300 a month each. A jail is now in course of erection at Dādhar; criminals have hitherto generally been kept in the stocks. The country has no schools or dispensaries. Inoculation takes the place of vaccination, being performed by Saiyids, Pirs, Shehs (the local name for Shaikhs), and Abābakis from the highlands.

Kāchhi Baroda.—*Thakurāt* in BHOPĀWAR AGENCY, Central India.

Kachins.—A community of Tibeto-Burman origin, inhabiting the north and north-east of Upper Burma and the Shan States. After the Shans and the Chins, the Kachins, known also as Chingpaws or Theinbaws, are the most numerous non-Burman people in the Upper Province. In 1901, 64,405 persons were returned as Kachins, but this includes only the population dealt with in the regularly enumerated areas. In what were known as the 'estimated' areas no race data were collected; but it is certain that at least three-eighths of the 127,011 persons inhabiting these areas were Kachins, and it will be safe to put the total of the race at nearly 120,000. About one-half of the population of Myitkyinā District is Kachin; and Kachins form a substantial portion of the inhabitants of Bhamo, Kathā, and the Ruby Mines, and of the Northern Shan States. Of the same primæval stock as the Burmans and the Tibetans, the Kachins seem to have remained for centuries in possession of the uplands about and to the north of the head-waters of the western branch of the Irrawaddy, and it is only within the last few decades that they have encroached on their neighbours in the south. Of recent years, however, observers have had an opportunity of witnessing in the Kachins what in all probability will be the last of those immigration waves from the north that have played so important a part in the history of the Indo-Chinese Peninsula. The Kachin tribes have penetrated westwards into Assam, where they are

known as Singphos, and as far down the valley of the Irrawaddy as Kathā District; but here they appear for the time being to have been brought to a halt by contact with a comparatively dense population. Though checked in one direction, the southward movement still continues. The line of least resistance has now shifted to the east: the borders of the Northern Shan States, till recently inhabited only by Shans and Palaungs, have been gradually overrun; and in the direction of China the Kachins have worked their way as far south as the trans-Salween State of Kengtung. The next few years will probably see a further extension of the race in a southerly direction. The Kachins have given considerable trouble on the frontier in the past, and more than one punitive expedition has had to be sent against them.

Strictly speaking, Chingpaw is the name given only to the southern section of the Kachin race, the communities farther north being known generally as Khakus. The social system of the Kachins is tribal, but nothing approaching to tribal federation is known. The five principal tribes are the Marips, the Lepais, the Lahtawngs, the 'Nkhums, and the Marans. Subdivisions, clans, and families abound. About one hundred family names have been recorded, and persons bearing the same family name do not intermarry. The Kachins are practically all spirit-worshippers, and their *nats* are extremely numerous and, for the most part, malignant. The Kachin places himself *en rapport* with the spirit world through the offices of a medium (*mi-twe*) or a professional priest (*tumsa*). Divination is frequently resorted to by this very superstitious race. The dead are disposed of by burial. *Taungya* (shifting cultivation) is the usual form of agriculture practised in the Kachin country, rice being the main crop. The Kachin house is ordinarily far larger than a Burmese or Shan dwelling, and has many points of resemblance to the lengthy structure seen in some Palaung villages. Slavery still exists among the Kachins, but only to the modified extent in which it survives among the Chins of the Chin Hills. The Kachin physical type varies considerably. Though the physiognomy is Mongolian and often of a character far from attractive to Europeans, aquiline noses are not unknown and regular features are occasionally met with. The figure is short but wiry. There is nothing very distinctive about the dress of the Kachin men. They wear as a rule a dark jacket, a waistcloth (frequently of a plaid pattern) or Shan trousers according to their habitat, and a turban varying from locality to locality. The women ordinarily wear a jacket, sometimes long with long sleeves, sometimes short and practically sleeveless, as well as a skirt and turban, which, in the case of Chingpaw women, is often of considerable size. Wherever the means of the wearer allow it, silver torques are worn by the Chingpaw women. The Kachins speak a language belonging to the same linguistic sub-family as

Burmese, and resembling the latter closely in grammatical structure. It has various dialects, but they do not differ materially from one another. The Marus, the Szis, and the Lashis, hill tribes of the north-eastern frontier, have been looked upon as Kachins, whom they resemble somewhat in manners and dress. It appears, however, probable from their language that these tribes are more nearly connected with the Burmans than with the Kachins. Their original home was probably to the east of that of the Kachins.

Kāchola.—An estate in the north-east of the State of Udaipur, Rājputāna, held by the Rājā Dhirāj of SHĀHPURA as a grant from the Mahārānā, on payment of a tribute of about Rs. 2,400 and the performance of service. The nature of the service to be performed has long been in dispute; but it has recently been decided that the Rājā Dhirāj is to send his usual quota of troops for three months every year to Udaipur, and is himself to attend for one month at the same place every alternate year, generally at the Dasahra festival. The estate consists of 90 villages with (1901) 12,515 inhabitants, the majority of whom are Jāts, Gūjars, Rājputs, and Brāhmans. The head-quarters are at the small town of Kāchola, situated in 25° 24' N. and 75° 8' E., 3 miles east of the Banās river, about 100 miles north-east of Udaipur city and 20 miles south-east of the town of Shāhpura.

Kachuā.—Village in the Bāgherhāt subdivision of Khulnā District, Bengal, situated in 22° 39' N. and 89° 53' E., at the junction of the Bhairab and Madhumatī rivers. Population (1901), 247. Kachuā is one of three market-places established by Mr. Henckell in the Sundarbans in 1782–3; the other two, Chāndkhāli and Henckellganj, are now of no importance, but Kachuā still has a large bazar. The principal export is rice; large quantities of *kachu*, a kind of yam, are also grown, from which the village possibly derives its name.

Kadaiyanallūr.—Town in the Tenkāsi *tāluk*, Tinnevely District, Madras, situated in 9° 4' N. and 77° 20' E. The population in 1901 was 13,939, weavers forming a large proportion. Local affairs are managed by a Union *panchāyat*.

Kadāna.—Petty State in REWĀ KĀNTHA, Bombay.

Kadapa.—District, subdivision, *tāluk*, and town in Madras. See CUDDAPAH.

Kadāura.—Chief town of the Baonī State, Central India, situated in 26° N. and 79° 50' E., 15 miles from Kālpī station on the Jhānsi-Cawnpore section of the Great Indian Peninsula Railway. It became the head-quarters about 1820, before which date the chiefs lived at Kālpī. Population (1901), 3,004.

Kadi Prānt.—A *prānt* or district in Baroda State, situated in Northern Gujarāt, between 23° and 24° 9' N. and 71° 15' and 71° 50' E., with an area of 3,015 square miles. It is the largest and most pro-

ductive of the four *prānts* into which the Gaikwār's territory is divided. It is bounded on the north by the States of Pālanpur and Rāadhanpur; on the west by Rāadhanpur State and Ahmadābād District; on the south by Ahmadābād and Kaira; and on the east by the Mahī Kānthā States. Most of the *prānt* lies west of the Sābarmatī, and consists of a dreary looking plain, with few trees except near village sites. *Some scattered portions east of the river are well wooded, and contain a few small but picturesque hillocks. The chief rivers are the Sābarmatī, the Saraswatī, and the Bahās.

The greater part of the area is under cultivation, the fields being often surrounded by hedges composed of species like *Capparis grandis*, *C. sepiaria*, *Jatropha Curcas*, *Euphorbia antiquorum*, with various *Leguminosae*, *Menispermaceae*, *Asclepiadeae*, and *Convolvulaceae* among the climbers. On waste ground such species as *Calotropis gigantea*, *Jatropha gossypifolia*, *Fagonia arabica*, *Echinops echinatus*, and *Tephrosia purpurea* are found. Field-weeds include *Celsia coromandeliana*, *Sphaeranthus indicus*, *Launaca nudicaulis*, *Coldenia procumbens*, and *Blumea eriantha*. Damp ground and stream beds contain *Aeluropus villosus*, *Herpestis Monnieria*, *Mollugo hirta*, *Cyperus laevigatus*, *Scirpus subulatus*, *Hydrilla verticillata*, and *Potamogeton pectinatus*. The planted or semi-spontaneous species near habitations include the mango, tamarind, teak, custard-apple, pomegranate, *bacl*, and various species of *Ficus*, such as banyan and *pīpal*.

Kadi is considered to be the healthiest part of the State, the *tālukas* of Dehgām, Vijāpur, Visnagar, and Pātan being favourably known for the comparative absence of malaria.

The population was estimated at 850,325 in 1872. At the three following enumerations it was: (1881) 988,487, (1891) 1,098,742, and (1901) 834,714. The *prānt* suffered severely in the famine of 1899-1900. It is divided into ten *tālukas* or *mahāls*, and two *petas* or sub-*mahāls*, statistics of which in 1901 are given in the table on the next page.

The chief towns are PĀTAN, VISNAGAR, SIDHPUR, VADNAGAR, KADI, UNJHĀ, MEHSĀNA (the head-quarters), VIJĀPUR, CHĀNASMA, KHERĀLU, LĀDOI, KĀLOL, VALĀM, and UMTA. About 98 per cent. of the population speak Gujarātī. In 1901 only 8 native Christians were enumerated in the *prānt*, but the American Methodist Episcopal Mission claims 250 adherents in eight villages, and provides five day schools.

About 90 per cent. of the total area is composed of light sandy soil, which is very productive if manured and irrigated. Black soil is found in patches. Irrigation is chiefly supplied by wells, including large temporary wells which are used for a single season. The principal crops are *bājra*, *jowār*, wheat, *banti*, *dangar*, barley, *vari*, *kadraṣ chenna*, *kuri*, *bāvtō*, *chasatiō*, *kāng*, *math*, *mag*, *udid*, *guvār*, *tuver*, *chola*, *chana*,

val, kulthi, sarsav, erandi, poppy, tal, kasumbo, tobacco, sugar-cane, cotton, bhendi, chillies, sakaria, and other garden products. Poppy is of great importance and covered 12,262 acres in 1904-5, yielding on an average 12 lb. of crude opium per acre.

<i>Tāluka.</i>	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Kadi . . .	331	1	118	71,784	217	- 25.8	4,342
Kālol . . .	267	1	88	80,532	302	- 17.1	5,038
Vijāpur . . .	346	2	107	117,286	339	- 24.9	5,301
Mehsāna . . .	195	1	83	75,254	386	- 10.2	4,314
Visnagar . . .	172	2	54	70,989	471	- 2.7	5,319
Vadāvli . . .	332	2	113	67,302	203	- 33.7	2,839
Pātan . . .	409	2	140	104,136	255	- 23.5	7,605
Sidhpur . . .	254	2	78	97,161	355	- 16.1	5,584
Kherālū . . .	246	3	88	76,463	311	- 22.5	4,408
Hārīj . . .	154	..	43	12,505	81	- 57.1	346
Dehgām . . .	239	1	95	49,461	207	- 28.6	2,865
Atarsumba . . .	70	1	56	18,871	270	- 37.9	1,276
Total	3,015	18	1,063	834,744	277	- 24.0	49,237

The spinning of cotton thread and silk and cotton-weaving are the chief industries. There may also be mentioned: embroidery on a small scale; the manufacture of ornaments in gold, silver, and ivory, and of betel-nut cutters, knives, brass and copper utensils, toys, and pottery. The number of ginning factories is six, one being connected with a weaving-mill. The chief centres of trade are Pātan, Kadi, Mehsāna, Visnagar, Vadnagar, and Sidhpur, the first being the most important. All these towns are connected by railway lines, by which the *prānt* is exceptionally well served. In addition to the main line of the Rājputāna-Malwā Railway, which passes from south to north, State lines diverge from Mehsāna to Kherālū, Pātan, and Viramgām, and from Kālol to Kadi and Vijāpur. The Ahmadābād-Parāntij line also serves some places. Other lines are projected from Manund Road to Chānasma, from Visnagar to Vijāpur, and from Kherālū to Dabhoda.

The land revenue rose from 32.2 lakhs in 1881 to 35.8 lakhs in 1891, and was 35.5 lakhs in 1901; but in 1904-5, while the demand was 22 lakhs, the collections amounted to only 11.2 lakhs. A settlement for fifteen years was made between 1891 and 1900, and parts of the *prānt* are now being resettled. The *prānt* contains 36 *mehvāsī* villages, which were formerly assessed on the cultivated area only, but a settlement has now been made on the ordinary lines at greatly reduced rates. The average assessment varies in different *tālukas* from

Rs. 1-3-0 to Rs. 2-8-0 per *bigha* ($\frac{4}{7}$ acre) for 'dry' land, and from Rs. 1-9-0 to Rs. 2-11-0 for 'wet' land.

The *prānt* contains twelve municipalities, three of which are administered by boards reconstituted in 1905 on a partly elective basis. These latter—Pātan, Sidhpur, and Visnagar—have a total income of Rs. 21,500 from customs, excise, and tolls, besides grants of Rs. 7,000; and the remaining nine receive grants of Rs. 20,500. A District board and local boards were constituted in 1905.

The administration is carried on by the *Sūbah*, while the court of the *prānt* Judge is at Visnagar. Education is well provided for, as the *prānt* has one high school (at Pātan), 6 Anglo-vernacular schools, and 369 vernacular schools, the total number of pupils in 1904-5 being 25,316. Two civil hospitals and eleven dispensaries treated 86,329 patients in 1904-5, of whom 359 were in-patients.

Kadi Tāluka.—South-western *tāluka* of the Kadi *prānt*, Baroda State, with an area of 331 square miles. The population fell from 96,782 in 1891 to 71,784 in 1901. The *tāluka* contains one town, KADI (population, 13,070), the head-quarters of the *tāluka*, and of the *prānt* until 1904; and 118 villages. The general aspect of the *tāluka* is very unprepossessing, as it consists for the most part of an uninterrupted plain bare of all trees. Round the town of Kadi, however, and in its neighbourhood there are trees in fair abundance, a gentle undulating country, and numerous tanks. The soil for the most part is light and sandy. In 1904-5 the land revenue was Rs. 2,58,000.

Kadi Town.—Head-quarters of the *tāluka* of the same name, Baroda State, situated in 23° 18' N. and 72° 2' E., on the Gaikwār's State line from Kālol on the Rājputāna-Mālwā Railway. Population (1901), 13,070. It is a place of some importance in the State, owing to its connexion with Malhār Rao, who held it as *jāgīrdār* and rebelled against the Gaikwār Govind Rao. Till 1904 it was the head-quarters of the Kadi *prānt*. The town seen from a distance presents rather a picturesque appearance, the domes of the fort gleaming from the thick wood which surrounds it. To the north lies a broad sheet of water fringed with trees, and on the edge which touches the houses the domed gate or Gunit Darwāza is effectively placed. The fort itself stands on a slight elevation; and its brick walls and numerous buttresses, though they enclose no great area, are of enormous thickness and in a good state of preservation. The chief buildings inside the fort are the Rang and Supra Mahals, while behind it is the palace or *sarkār vāda*, which was formerly occupied by the *Sūbah's* and other offices. In addition, the town possesses a civil hospital, courts, jail, Anglo-vernacular and vernacular schools, and various *dharmśālas* and temples. Its narrow streets contain gaudily painted houses, lavishly decorated with wood-carving, but the choking dust and the crumbled appearance of the

generality of the habitations give Kadi a mournful look. The State makes an annual grant of Rs. 2,700 to the municipality. Several fairs are held during the year, but the trade of the town is not very great. The chief industries are weaving, calico-printing, and the manufacture of brass and copper utensils. The cantonment is at present garrisoned by a detachment of State troops.

Kādipur.—Eastern *tahsīl* of Sultānpur District, United Provinces, comprising the *parganas* of Aldemau and Chāndā, and lying between $25^{\circ} 59'$ and $26^{\circ} 23'$ N. and $82^{\circ} 6'$ and $82^{\circ} 41'$ E., with an area of 442 square miles. Population fell from 274,458 in 1891 to 265,450 in 1901, the rate of decrease being the highest in the District. There are 741 villages, but no town. The demand for land revenue in 1903-4 was Rs. 3,69,000, and for cesses Rs. 59,000. The density of population, 601 persons per square mile, is below the District average. The *tahsīl* is crossed by the Gumtī, and contains a large area of low-lying, badly drained ground. It thus suffers considerably in wet years, such as 1894. In 1903-4 the area under cultivation was 263 square miles, of which 151 were irrigated. Wells and tanks or *jhils* are of almost equal importance as a source of supply in ordinary years.

Kādirābād.—Walled town in the Jālna *tāluk* of Aurangābād District, Hyderābād State, situated in $19^{\circ} 51'$ N. and $75^{\circ} 55'$ E., on the left bank of the Kundlika, opposite the town of Jālna. Population (1901), 11,159. It is an important centre of the grain and cotton trade, and contains a weekly bazar for grain and cattle. There are three ginning and two pressing mills, employing 470 hands. Post and customs offices are located here.

Kadiri Tāluk.—Western *tāluk* of Cuddapah District, Madras, lying between $13^{\circ} 47'$ and $14^{\circ} 31'$ N. and $77^{\circ} 51'$ and $78^{\circ} 28'$ E., with an area of 1,158 square miles. It is very irregular in shape, its extreme length being 45 miles, and its maximum breadth 35 miles. The population in 1901 was 145,503, compared with 134,915 in 1891, the increase during the decade being greater than in any other *tāluk* of the District. The density was 126 persons per square mile, compared with the District average of 148. It contains one town, KADIRI (population, 10,493), the head-quarters; and 139 villages. The demand for land revenue and cesses in 1903-4 amounted to Rs. 2,07,000. The *tāluk* is very stony and barren, and is cut up by detached rocky hills which are usually destitute of vegetation. During the hot season the ryots entirely depend for water on wells, the rivers and almost all the tanks being quite dry. These wells are constructed at great cost and with considerable labour, the ground below the thin surface soil being often solid rock. The Maduleru, one of the feeders of the Chitrāvati, rises in the *tāluk*, and the Pāpaghni passes through its southern and south-eastern portions; but they are of little use for irrigation. The soil is very poor, being

chiefly coarse red earth mixed with disintegrated granite, which is often impregnated with soda and other salts. Black cotton soil is, however, met with in patches here and there. The chief products are horse-gram, *cholam*, sugar-cane, and cotton. A good deal of jaggery (coarse sugar) is produced. Hematite occurs in small quantities and used to be smelted by the primitive native processes.

Kadiri Town.—Head-quarters of the *tāluk* of the same name in Cuddapah District, Madras, situated in $14^{\circ} 6' N.$ and $78^{\circ} 10' E.$ Population (1901), 10,493. A large temple here (one of the most famous in the District) is dedicated to Narasimha, to whose festival many pilgrims resort in the early part of the year. It is said that an image of Narasimha was found in an ant-hill under a *chendra* tree, but the same story is told of other places. The name of this tree in Sanskrit is *khadri*; and tradition states that when the jungle was cleared by Ranga Nāyudu, a local chieftain of Patnam, and the temple was built, this name was given to the town which arose round the shrine. It was for a long time the practice to let loose a tiger or leopard at the festival here in January and shoot at it, but one year a bystander was shot instead, and the custom was prohibited by the Collector. Two days after the car-procession, Paraiyans and other low-caste people—contrary to all precedent—are allowed to enter the temple. They bathe in the river close by and pass into the building in great crowds, carrying small bundles containing coin and jewels wrapped up in cloths, which they present to the god. These bundles are received by a person employed by contractors who farm the privilege.

Kadiri shows signs of having at one time been a Musalmān town. Though the existing buildings bear no trace of Muhammadan architecture, for two miles round there is a large number of tombs and mosques, mostly decayed but some still well preserved. The place was formerly the seat of a local chieftain. When Munro took over the country he sent for the chief to settle with him the amount of revenue he was to pay. The man refused to come, so a detachment was sent against him. They surprised the fortified temple in which he had taken post, but he escaped in the confusion. His possessions were, however, confiscated. Since the town became a station on the South Indian Railway, it has increased in importance as a trade centre. A brisk business in grain is transacted. There is a branch of the London Missionary Society.

Kadod.—Place of Hindu pilgrimage in the Broach *tāluka* of Broach District, Bombay, situated in $21^{\circ} 44' N.$ and $73^{\circ} 8' E.$, on the right bank of the Narmadā, about half-way between the city of Broach and Suklatīrtha. The site of the fair is a very small hamlet with only twelve houses and a population (1901) of 53. The ceremonies, which occur once in every nineteen years when Vaishākh (April-May) happens to be

the intercalary month, are in honour of Mahādeo, under the name of Koteswar or Kotilingeshwar, and last for a whole month. Mr. Williams in his Memoir on Broach mentions that one of the periodical gatherings took place in 1812. In that year the total number of visitors was estimated at 200,000, and the most perfect order and good conduct are said to have been maintained by the crowd. In 1869 people began to collect on April 13, and all was not over till May 11; the greatest attendance at any one time was estimated at 100,000, and the total throughout the whole month at 500,000. The last fair was held in 1888, when the bed of the river was crowded with *lingams*, which the people in many cases carried away to their homes. During the time of the fair the pilgrims live in sheds and temporary huts. The Narbadā flows close by the site of the fair; but as the gathering takes place in the hot season, and below the limit of the tide, fresh water is hard to obtain. There is a temple at Kadod consisting of one chamber about 11 feet square, and entered by a door 5 feet 2 inches high and 3 feet 3 inches wide.

Kadoli.---Petty State in MAHĪ KĀNTHA, Bombay.

Kadūr District.---District in the west of the State of Mysore, lying between $12^{\circ} 55'$ and $13^{\circ} 54'$ N. and $75^{\circ} 5'$ and $76^{\circ} 22'$ E., with an area of 2,813 square miles. It is bounded on the north by Shimoga District; on the east by Chitaldroog and Tumkūr Districts; on the south by Hassan District; and on the west by the South Kanara District of Madras.

The main part of the District is composed of the most mountainous region within the limits of Mysore. Bordered on the west by the mighty Ghāt range, rising at this part into some of the loftiest peaks between the Himālayas and the Nilgiris; supporting on its centre the stupendous barrier of the Bābā Budan chain, of even superior elevation; between these towering masses covered with a complete network of lofty hills whose altitude at certain points, as in the grand Merti peak of Kalasa, renders them conspicuous landmarks even in this region of heights, while ranges of more modest pretensions extend throughout the north and east—this District, with a slight exception eastwards, may truly be described as pre-eminently the Malnād or ‘highland country.’ Nor are these mountain tracts wanting in those charms of wood and water which tend to soften the harsher features of so rugged a landscape. For though the summits rear themselves bareheaded into space, the slopes are thickly clad with primaeval forest, through which the shining streams thread their often headlong way, fertilizing the narrow valleys and open glades, till their waters descend to the level of the larger rivers, flowing in steep and sunken channels, whence issue dense mists that cover the face of the country, only lifting as the heat of the morning sun increases

**Physical
aspects.**

in power. In these vast solitudes the habitations of man are few and far between. A single homestead, hidden amid the luxuriance of tropical vegetation, is often the only sign of human presence for many miles around. Roads there used to be none. All the valuable produce of the country was, and to a great extent still is, transported on the backs of cattle, the rallying sounds from the belled leaders of the drove resounding far and wide. The eastern or Maidān *tāluks* partake of the general features of that description of country in the other Districts, the transition from Malnād to Maidān being very abrupt and striking on approaching Lakvalli from the west.

The congeries of mountains, so far as they can be reduced to a system, seem to range themselves into a central ridge running north and south, with a great loop or circle on either hand; while at the south-western angle the Western Ghāts make a bend inwards to the east, marking the initial point of the line which divides the northern from the southern waters of Mysore. The main ridge spoken of above commences at Ballārayandurga, and passing east of Mertigudda and Koppadurga, separates the basin of the Bhadra from that of the Tunga, and runs up towards Mandagadde, connecting with the central range of Shimoga District. On the west of this ridge is the valley in which Sringeri stands, enclosed with a girdle of mountains; while to the east of it, beyond the right bank of the Bhadra, is the Jāgar valley, completely environed with the BĀBĀ BUDAN MOUNTAINS. The highest point in the District, and in Mysore, is Mulainagiri in the Bābā Budans, which rises to 6,317 feet above the sea. In the same group, Bābā-Budan-giri is 6,214 feet, and Kalhattigiri 6,155. The loftiest peak in the Western Ghāts is the KUDREMUKH or 'horse-face' mountain, so called on account of its appearance from the sea, to which it presents a landmark well-known to navigators on the west coast. Its height is 6,215 feet. Of other conspicuous points, the grand Ballārayandurga is 4,940 feet, Gangāmūla in the Varāhaparvata 4,781, Woddingudda 5,006, Lakkeparvata 4,662. The superb hill of Kalasa, called the Mertigudda, situated in the heart of the mountain region to the west, is 5,451 feet. Kanchinkaldurga is 4,081 feet, and Sakunagiri 4,653.

The principal rivers are the twin streams, the Tunga and Bhadra. They both rise at Gangāmūla in the Varāhaparvata in the Western Ghāts. The Tunga flows north-east past Sringeri, and then turns north-by-west to Shimoga District. The Bhadra runs east past Kalasa, and then with a north-easterly course across the western opening of the Bābā Budan horseshoe, receives the Somavāhini from the Jāgar valley on the east, and passes on to Shimoga District. On the east of the Bābā Budans the Gaurihalla and Avati are twin streams, rising near Mulainagiri. The first expands into the Ayyankere Lake near Sak-karepatna, and taking the name of Veda runs north-east to Kadūr.

The other, the northern stream, forms the large Madaga tank ; and the two, uniting near Kadūr town, continue under the name of Vedāvati into Chitaldroog District.

The Shimoga schistose band extends to the southern boundary of the District, and spreads from near Kadūr town to the edge of the Western Ghāts, where it forms much of the high Ghāt country culminating in the Kudremukh. From this point the western boundary is probably continuous up to Anantapur (Shimoga District). At Kudremukh the schistose beds are nearly horizontal, with a slight dip to the north ; the scarp on the southern side of the mountain, descending to South Kanara, displays a series of Dhārwar rocks about 5,000 feet in thickness, composed largely of trap flows, with some beds of micaceous and other schists, and resting unconformably on the denuded surface of the Archaean rocks below. On the eastern side of the band, near Ajjampur, the rocks dip generally to the east. To the south and west of Tarikere large masses of chloritic schists occur ; and underlying these to the south is a great thickness of trap flows, forming part of the Santaveri and Bābā Budan mountains. The trap flows are disposed in a very flat anticlinal curve, and to the west are seen to be overlaid by a great thickness of dark schists, with haematite bands and quartzites overlying these again. In the country around Ajjampur and Tarikere masses of conglomerate are developed, consisting chiefly of large boulders and pebbles of granite in a quartz-felspar-chlorite matrix ; these pass through various gradations into grits, quartzites, and chloritic schists.

At the extreme heights of Mulainagiri and Kudremukh the mountains are clothed with grass and herbs, but are generally bare of trees. The plants of the west of Mysore and of Coorg are nearly all found in this alpine District, in addition to such as *Lysimachia deltoides*, *Anemone rivularis*, *Ranunculus diffusus*, *Cinnamomum Wightii*, with other genera and species far too numerous to mention.

At Chikmugalūr, the head-quarters, the mean annual temperature is between 72° and 73°, the daily range being about 20°. The temperature of the Malnād often falls much lower, the cold in the early morning at Christmas time being very sharp. Malarious jungle fevers are always prevalent at certain seasons, and neither Europeans nor natives are exempt from attacks. The average annual rainfall at Chikmugalūr is variously stated at from 36 to 42 inches. But the country lying within the Western Ghāts has a far heavier fall. The annual average at Koppa is given as 122 inches, and at Mudgere as 103. At Hariharpur 166 inches fell in 1874 ; at Mudgere 194 inches in 1882 ; and at certain coffee estates in that taluk 145 and 156 inches have been received in a year. The fall is heaviest in June, July, and August, there being 43 inches in July alone.

The west was from an early period subject to the Kadambas, and the

remainder of the District to the Gangas. About the eighth century

History. the Sāntara kingdom was established at Pomburchcha or Humcha in Shimoga District. The Sāntaras extended their rule southwards as far as Kalasa in this District, and at a later period made their capital at Sisila or Sisugali at the foot of the Ghāts in Mudgere. Eventually their capital was at Kārkala in South Kanara. At one time they acknowledged the supremacy of the Chālukyas, and were stanch Jains. But under Vijayanagar rule they became Lingāyats, and were known as the Bhairarasa Wodeyars. Meanwhile, the Hoysalas arose at the beginning of the eleventh century, their original seat being Sosevūr, now Angadi in the Mudgere *tāluk*. They were supreme throughout Mysore and beyond from the twelfth to the fourteenth century, when they were overthrown by Musalmān invasions from the north of India. The Vijayanagar empire was founded in 1336, and its success at first was greatly due to the aid given by the head of the Sringeri *math*, originally established by the reformer Sankarāchārya in the eighth century. In consequence of this aid the capital of the new empire was called Vidyānagara, after Vidyaranya or Mādhava, its first minister, who was also the head of the *math*. Vidyānagara in course of time passed into the form Vijayanagara. After the fall of Vijayanagar, the Keladi chiefs of Bednūr assumed independence, and restored the possessions of the Sringeri *math*. In the seventeenth century Sivappa Naik of Bednūr overran many parts of the District. But he was opposed by Mysore; and in 1694 a treaty was signed between the two powers, by which the latter gained nearly the whole of the District, and Haidar Ali's conquest of Bednūr in 1763 completed its inclusion in Mysore. In the east, Tarikere was the seat of a line of feudatory chiefs driven out of Basavāpatna in Shimoga District by the Bijāpur invasions of the seventeenth century. When, in 1830, a rebellion broke out in the Nagar country, owing to the misrule of the Rājā, the Tarikere chief was one of the first to escape from Mysore and join the rebels. The result was the extinction of this line of chiefs. The opening out of the inaccessible Malnād country in the west by roads at the end of last century has secured the peace of that wild part.

The most important archæological feature is the Amritesvara temple near Tarikere, erected in the twelfth century, under the Hoysalas. Some interesting Jain temples are represented by the ruins at Sosevūr or Angadi, the place of origin of the Hoysalas, which contain fine specimens of carving. The Vidyāsankara temple at Sringeri is an effective building, in the Dravidian style of Vijayanagar. The inscriptions of the District have been translated and published.

The population at each Census in the last thirty years was: (1871)

310,176, (1881) 293,822, (1891) 332,025, and (1901) 362,752. The decrease in 1881 was due to the famine of 1876-8.

By religion, in 1901 there were 326,960 Hindus, 18,144 Musalmāns, 12,205 Animists, 3,888 Christians, and 1,554 Jains. The density of population is 129 persons per square mile, that for the State being 185. The number of towns is 10, and of villages 1,352.

Population.

The following are the principal statistics of population in 1901 :—

Taluk.	Area in square miles	Number of		Population	Population per square mile.	Percentage of variation in population between 1891 and 1901	Number of persons able to read and write.
		Towns	Villages				
Kadūr	571	3	317	80,904	142	+ 12.0	4,068
Chikmugalū	638	1	235	90,681	142	+ 6.6	5,882
Mudgere	435	1	137	46,212	107	+ 11.7	2,284
Koppa	657	2	168	54,827	83	+ 1.4	3,145
Sringeri jāgīr	44	1	259	10,656	244	+ 16.5	1,216
Tarikere	468	2	236	79,472	170	+ 12.5	4,392
District total	2,813	10	1,352	362,752	129	+ 9.1	21,287

NOTE.—In 1902-3 a transfer of 25 square miles was made from the Kadūr taluk to Chitaldroog District.

As regards castes, Lingāyats number 70,000; the outcaste Holeyas and Mādigas, 56,000 and 13,000; Wokkaligas or cultivators, 50,000. Of Brāhmanas there are 18,000. Two-thirds of the Musalmāns are Shaikhs, 12,000. Of nomads, Lambānis number 8,600; Koramas, 2,000; and Iruligas, 1,200. By occupation, 70.3 per cent. are engaged in agriculture and pasture, 12.3 per cent. in unskilled labour not agricultural, and 6.9 per cent. in the preparation and supply of material substances.

There are 3,888 Christians in the District, of whom 3,606 are natives. The Roman Catholics and Wesleyans have stations at Chikmugalūr and visit other parts.

Along the south of the Bābā Budan mountains is a rich tract of black cotton soil, whose fertility, enhanced by the command of an unfailling supply of water from the hill streams, is said formerly to have given to the plain of Chikmugalūr

Agriculture.

the name of Honjavanige Sime, or 'land flowing with gold.' The higher tracts of this region are generally gravelly. Black cotton soil prevails also in the neighbourhood of Ajampur, together with red and gravelly soils. The western parts of Tarikere contain sandy and gravelly soils. About Yegate the earth seems poor and has a white chalky appearance. Farther south the soil is adapted to the cultivation of the coco-nut without irrigation, as in the adjoining parts of Tumkūr and Chitaldroog Districts. The soil of the Malnād bears a general

resemblance to that of the same region extending through the neighbouring Districts north and south.

The following table gives statistics of cultivation for 1903-4 :—

Tāluk	Area in square miles, shown in the revenue accounts.				
	Total.	Cultivated.	Irrigated.	Forests.	Cultivable waste.
Kadūr . . .	536	202	17	1	85
Chikmugalūr . .	609	144	42	85	22
Mudgere . . .	426	80	35	4	9
Koppa . . .	658	82	51	118	18
Tarikere . . .	460	178	18	57	25
Total	2,689	686	163	265	159

In addition to the ordinary cereals, pulses, and oilseeds, the following crops call for special notice. The areca gardens, which occupy the moist and sheltered valleys throughout the west, produce the best description of nut in the country, that of Kalasa and its neighbourhood being in especially high repute. The coffee cultivation of Southern India had its origin in this District. It was first introduced by Bābā Budan in the seventeenth century on his return from a pilgrimage to Mecca, when he planted a few berries he had brought with him near his hut on the hills that bear his name. But it was not till 1820 that the cultivation extended beyond his garden, and not till twenty years later that European enterprise was first attracted to it. The original plants then put in by Mr. Cannon to the south of Bābā-Budan-giri are still flourishing. Land was soon after taken up for coffee in South Manjarābād, and since 1860 European planters have settled in almost a continuous chain of estates throughout the Malnād. The coffee zone in this District is estimated to cover about 1,000 square miles. The cardamom grows wild in the same parts, but owing to the extension of coffee estates it is no longer plentiful except in the Kalasa and Melban. gādi māganis. Its systematic cultivation has been taken up in some parts with success. Experiments made with cinchona, tea, cotton, and mulberry have not been successful. The area occupied by the various crops in 1903-4 was : *rūgī*, 172 square miles ; rice, 153 ; coffee, 123 ; gram, 42 ; other food-grains, 67 ; garden produce, 26 ; oilseeds, 22.

During the twelve years ending 1904 there was advanced for land improvements Rs. 14,500, and for irrigation wells Rs. 7,300.

The area irrigated from channels is 12 square miles, from tanks 54, and from other sources 97. The number of tanks is 4,394, of which 103 are classed as 'major.'

The west of the District contains some of the best forests in the

State. The Lakvalli teak forests have for many years supplied Western Mysore and the Bellary country with that timber. Throughout the Jāgar valley and most of the Koppa and Mudgere *tāluka*s, a continuous stretch of valuable forest densely clothes the hill-sides, giving shelter to much coffee cultivation. The State forests cover an area of 144 square miles, 'reserved' lands 124, and plantations 144. The forest receipts in 1903-4 were Rs. 2,98,000, chiefly from sandal-wood.

Gold-mining was begun near Ajjampur by the Kadūr-Mysore Company, but owing to the poor prospects has been suspended. Iron ore is obtained largely and smelted along the hills east of the Bābā Budan range, and round Ubrāni. Corundum is found in abundance near Kadūr and throughout the east.

The principal articles manufactured are oils and oil-cake, cotton piece-goods, woollen blankets, and glass bangles. Jaggery is also made, and there is some production of iron. A certain amount of catechu or terra japonica is prepared. There are reported to be 300 looms for cotton, 400 for wool, 87 oil-mills, and 201 jaggery and sugar-mills.

Trade and communications.

The most important exports are coffee, pepper, cardamoms, rice and other food-grains, and oilseeds. It is only a quarter of a century since the Malnād began to be opened up by a network of roads, and only since 1889 that the railway has run through a small part of the District. These agencies must certainly effect considerable changes in trade and the transport of commodities. The principal traffic between the Malnād and Maidān *tāluka*s was formerly through five *kanaves* or passes: namely, Talagudde, Talamakki, Birnahalli, Gantevināyakan, and Sitalmallapan.

The Southern Mahratta Railway from Bangalore to Poona runs through the east of the District, with a branch from Birūr north-west to Shimoga, the total length of line being 62 miles. Provincial roads have a length of 259 miles, and District fund roads of 403 miles.

There has been no general famine in the District since that of 1876-8, but the areca gardens have suffered occasionally in periods of drought.

The District is divided into five *tāluka*s: CHIKMUGALŪR, KADŪR, KOPPA (including Sringeri *jāgīr*), MUDGERE, and TARIKERE. The following subdivisions were formed in 1903, and placed under Assistant Commissioners: Chikmugālūr and Mudgere; Kadūr, Tarikere, and Koppa, with head-quarters at Chikmugālūr.

Administration.

The District court at Shimoga has jurisdiction over the whole of this District, and the Subordinate Judge's court over a part. There is a Subordinate Judge's court at Chikmugālūr for the remaining part, and a Munsif's court at Yadehalli.

The land revenue and total revenue are shown below, in thousands of rupees :—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	6,92	7,73	8,42	8,11
Total revenue . .	9,13	12,27	14,46	15,55

The revenue survey and settlement were introduced into the east of the District in 1877-8, and into the west in 1880-1. The incidence of land revenue per acre of cultivated area in 1903-4 was Rs. 1-12-10. The average assessment per acre on 'dry' land is R. 0-13-1 (maximum scale Rs. 2-10-0, minimum scale R. 0-0-6); on 'wet' land, Rs. 3-4-0 (maximum scale Rs. 8-8-0, minimum scale R. 0-1-0); on garden land, Rs. 7-4-2 (maximum scale Rs. 18, minimum scale Rs. 1-8-0).

There were eight municipalities in 1903-4—CHIKMUGALŪR, TARIKERE, BIRŪR, Kadūr, Yedehalli, Mudgere, Koppa, and Sringeri—with a total income of Rs. 57,000 and an expenditure of Rs. 66,000. There were also two village Unions, Ajjampur and SAKKAREPATNA, whose income and expenditure were Rs. 2,000 and Rs. 7,000. The District and *tāluk* boards had an income of Rs. 50,000 in 1903-4, chiefly derived from a share of the Local fund cess, and spent Rs. 49,000, including Rs. 33,000 on roads and buildings.

The strength of the police force in 1903-4 was one superior officer, 60 subordinate officers, and 381 constables. There were 7 lock-ups, containing a daily average of 16 prisoners.

In 1901 the percentage of literate persons was 5.9 (10.5 males, 0.6 females). The number of schools increased from 201 with 5,130 pupils in 1890-1 to 292 with 7,324 pupils in 1900-1. In 1903-4 there were 207 schools (95 public and 112 private) with 4,936 pupils, of whom 692 were girls.

Besides the civil hospital at Chikmugalur, there are 14 dispensaries, in which 111,882 patients were treated in 1904, of whom 700 were in-patients, the number of beds available being 36 for men and 22 for women. The total expenditure was Rs. 33,000.

The number of persons vaccinated in 1904 was 4,723, or 13 per 1,000 of the population.

Kadūr Tāluk.—Eastern *tāluk* of Kadūr District, Mysore, lying between 13° 19' and 13° 50' N. and 75° 51' and 76° 22' E., with an area of 571 square miles. The population in 1901 was 80,904, compared with 72,217 in 1891. The *tāluk* contains three towns, BIRŪR (population, 5,701), Kadūr (3,881), the head-quarters, and SAKKAREPATNA (1,884); and 317 villages. An area of 25 square miles was transferred to Chitaldroog District in 1902-3. The land revenue demand in 1903-4 was Rs. 1,75,000. On the west lies the complicated

mass of hills (Sakunagiri, 4,653 feet) east of the Bābā Budans, and on the east the Garudangiri (3,680 feet) group. The Vedāvati river runs through the middle in a north-easterly direction. It is formed by the junction of the Veda and Avati, which rise in the Bābā Budans, the former supplying the Ayyankere, and the latter the Madagakere, the two largest tanks in this part of the country. Numerous channels are taken off from dams across these streams, forming an irrigated tract of great fertility. The annual rainfall averages 22 inches. Most of the *tālūk* is a slightly undulating plain. The waste lands are covered with wild date or *babūl* trees, and a considerable area is reserved for grazing, supporting a large number of cattle and sheep. Superior tobacco is grown in the south and west. Coco-nuts are grown without irrigation in low sandy soils. Iron ore is obtained from Hogaribetta in the north-west.

Kadus.—An Upper Burmese tribe inhabiting the central portion of the watershed that separates the Irrawaddy from the Chindwin river. In 1901 the tribe numbered 34,629, nearly all of whom were inhabitants of Kathā District. The origin of the Kadus is doubtful; but, judging by their language and habitat, it seems probable that they are descendants of hill tribes who have intermarried with the surrounding Shan and Burman population and have by some means acquired a tribal identity of their own. Their speech is a mixture of Burmese, Shan, and Kachin, but is now gradually dropping out of use, and will doubtless soon become obsolete. In dress the Kadus used to differ somewhat from their neighbours; but only the elder women now adhere to the tribal costume, which consists of a wholly black or dark-blue jacket, petticoat, and head-cloth. Burmese dress has become almost universal. The practice of staining the teeth of the women appears to have been followed in the past, but the custom is dying out. The Kadus are Buddhists. They have two main subdivisions, known as the *Apwa* (male) and the *Ama* (female), but the distinction has been obliterated by intermarriage. They are believed to be connected with the Saks or Thets, an almost extinct tribe of Arakan. It is possible that they are allied to the Tamans, a probably hybrid tribe of the Upper Chindwin District.

Kāfiristān (literally, 'the country of the infidels').—A mountainous region in Afghānistān, lying due north of Jalālābād, in which district it is now included. Its approximate area is about 5,000 square miles. Its boundaries are the Hindu Kush on the north; the eastern watershed of the Bashgal on the east; the Kunar valley and the Kābul country on the south; and on the west the ranges above the Nijrao and Panjshīr valleys. Kāfiristān consists of an irregular series of main valleys, for the most part deep, narrow, and tortuous, into which a number of ravines and glens pour their torrents. The hills separating

the main valleys one from the other are of considerable altitude, rugged, and difficult. As a consequence, during the winter, Kāfiristān consists practically of a number of separate communities with no means of communication with one another. The country appears to be divided into three main drainage systems—those of the Kao or Alingār; of the Pech or Kāmāh, named after the important pass of that name; and of the Bashgal. All these streams ultimately find their way into the Kābul river.

In Kāfiristān every kind of mountain scenery is to be met with. At the lower elevations the hill-sides are covered with wild olives and evergreen oaks. Fruit trees abound—the walnut, mulberry, apricot, apple, and vine—while splendid horse chestnuts and other trees offer pleasant shade in the hot season. As one ascends, the fruit trees disappear, being replaced by dense pine and cedar forests. These in their turn cease—the hills above 9,000 feet are almost bare—but the willow, birch, and juniper cedar are found. Above 13,000 feet no vegetation exists, except rough grasses and mosses. The rivers teem with fish, which, however, no Kāfir will eat. The chief wild animals are the *mārkhōr*, the *uriāl*, leopards, and bears.

With the exception of a short visit to the upper part of the Bashgal valley by Colonel Lockhart's mission in September, 1885, and of Sir George Robertson's two visits in 1889 and 1890-1, the country has not been penetrated by any Europeans in modern times. The people of the country, styled Kāfirs ('infidels') by their orthodox Afghān neighbours, were known to the emperor Bābar as the *Siāhposh* ('wearers of black raiment'). They comprise several more or less inimical tribes, differing from one another in language, dress, manners, and customs; and even their primitive pagan religion afforded no bond of common union. This was a somewhat low form of idolatry, with an admixture of ancestor cult and traces of fire-worship. Their total number probably does not exceed 60,000. Until recent years these mysterious people were popularly supposed to be a fair race, noted for their beauty, and of Graeco-Bactrian origin. As a matter of fact they are by no means fair, their colour being that of the average native of the Punjab; their usual type of feature is good; but their beauty, like many other ideas concerning them, is a myth. Sir George Robertson considers that the present dominant races of Kāfiristān are mainly descended from the old Indian population of Eastern Afghānistān, who refused to embrace Islām in the tenth century, and fled for refuge from the victorious Moslems to the hills. Dr. Grierson, however, holds that the Kāfir dialects (which Dr. Trumpp considered to be a 'pure Prākṛit') belong to the non-Sanskritic languages of the Indo-Aryan family, and that 'the speakers of these appear to have arrived at their present seats from the north, and not to be colonists

from the south, where that form of Indo-Aryan language which we call Sanskrit became developed¹.

Whatever their origin, the Kāfirs, except in the case of the outlying Sāfis (see JALĀLĀBĀD), succeeded in resisting all attempts at conversion until the reign of the late Amīr, when Afghān troops overran the country, and brought about its complete subjection. With the exception of the Rāmgulis, who held out for a considerable period, the Kāfirs, who were ill-armed, made but a feeble resistance, and have accepted the Muhammadan religion with little demur. A very small garrison of Afghān troops now suffices to keep the country in order.

There is a small slave population, who are perhaps the remnant of more ancient people subjugated by the lately dominant tribe. The affairs of a tribe are nominally arranged by a consultation of headmen who are known as *jaṣṭ*; but, as a matter of fact, in ordinary times, public business falls into the hands of a few elders. Disobedience to the *jaṣṭ* is punished by burning down the offender's house and destroying his property. Theft is punishable by a fine of seven or eight times the value of the stolen property, but the full penalty is seldom exacted. The punishment for adultery is a fine in cows varying from three to six. It is in consequence not uncommon for women to endeavour to entangle men in order to get cows for their husbands. Murder and manslaughter are punished alike. The offender must at once leave his village and become a *chile* or outcast. His house is burnt by the dead man's family or clan and his property plundered; he must nevermore return to his village except by stealth; and whenever he encounters a member of the dead man's family he must at once conceal himself. This stigma applies not only to the criminal himself, but to his direct descendants and to his children-in-law. There are several villages in Kāfiristān which are places of refuge, where slayers of their fellow-tribesmen reside permanently.

Kāfir women are practically slaves, being to all intents and purposes bought and sold as household commodities. The young women are mostly immoral. There is little or no ceremony about a Kāfir marriage. If a man becomes enamoured of a girl, he sends a friend to her father to ask her price. If a price is agreed upon, the man immediately proceeds to the girl's house, where a goat is sacrificed, and then they are considered to be married, though the bride remains with her parents until the full price has been paid. The dead are disposed of in a peculiar manner. They are not buried, or burnt, but are deposited in large boxes, placed on the hill-side or in some more or less secluded spot.

Kāfirkot.—Ruins in Dera Ismail Khān District, North-West Frontier Province, situated in 32° 30' N. and 71° 21' E. The site is also known

¹ *Report on the Census of India*, 1901, chap. vii.

as Til Kāfirkot or Rājā Sir-kot, and lies a few miles south of the point where the Kurram river joins the Indus, upon a spur of the Khisor hills. The remains consist of extensive lines of bastioned walls built of solid masonry, enclosing an area filled with the débris of ancient dwellings. The remains of four small Hindu temples are relatively well preserved, and their outer faces are decorated with elaborate carvings of stone. For some details see A. Cunningham, *Archaeological Survey Reports*, vol. xiv, pp. 26, 254, and Dr. Stein's *Archaeological Survey Report of the North-West Frontier Province and Baluchistān* (1903-5). A similar ruin of the same name exists at Bilot, about 30 miles due south.

Kāgal State.—Native State feudatory to the Kolhāpur State, within the Political Agency of Kolhāpur and the Southern Marāthā Country, Bombay, lying between 16° 30' and 16° 35' N. and 74° 20' and 74° 25' E. See KOLHĀPUR STATE.

Kāgal Town.—Chief town of the feudatory *jāgīr* of the same name in Kolhāpur State, Bombay, situated in 16° 34' N. and 74° 20' E., 10 miles south-east of Kolhāpur city. It lies in the valley of the Dudh-ganga about a mile south of the river, surrounded by rich garden land and shaded by fine old mango-trees. Population (1901), 7,688. There are ruins of mosques and temples. The old fort was destroyed by Jaswant Rao Sindhia of Kolhāpur in 1780, and a new fort was built about 1813 by Hindu Rao Ghatge. Of the public buildings lately raised at a cost of about one lakh, the most important are three large resthouses, three temples, one of which contains the *kārbhārī's* office, and water-works from which pipes supply the town reservoirs with water. Every year in Kārtik (October–November) a fair is held in honour of Gaibi Pir, at which the chief spends about Rs. 2,000. The fair is attended by 10,000 people from Kolhāpur and the neighbouring villages.

Kāgān (*Khāgān*). — Mountain valley in Hazāra District, North-West Frontier Province, penetrating far into the heart of the Himālayan system, and surrounded by Kashmīr territory on every side except the south. The valley has an area of 800 square miles, and is 60 miles in length, with an average breadth of 15 miles. Lofty ranges shut it in on either hand, their summits rising to a height of 17,000 feet. Transverse spurs intersect the valley, which is inhabited by a sparse population. Kāgān comprises twenty-two *rakhs* or forest and grazing Reserves, with a total area of 90 square miles, while the area of 'reserved' and unreserved forest is 457 square miles. The rights of cutting grass and grazing cattle are leased out annually. The Forest department only fells timber, which is launched into the river Kunhār, caught at different timber dépôts, and rafted to Jhelum. The river Kunhār forces its way through a narrow central gorge to join the Jhelum after draining the entire valley. The Kāgān valley forms the northernmost extension of

British India, and stretches far up into the mountain region. Its open mouth turns towards the main body of Hazāra District. The inhabitants consist almost entirely of Muhammadan Swātis and Gūjars. Kāgān village is situated in $34^{\circ} 46' \text{ N.}$ and $75^{\circ} 34' \text{ E.}$

Kahalgaon.—Town in Bhāgalpur District, Bengal. See COLGONG.

Kahlūr.—One of the Simla Hill States, Punjab. See BILĀSPUR.

Kahnaur.—Town in the District and *tahsīl* of Rohtak, Punjab, situated in $28^{\circ} 45' \text{ N.}$ and $76^{\circ} 32' \text{ E.}$, 11 miles south of Rohtak town and 15 miles north-west of Jhajjar. Population (1901), 5,024.

Kahrur.—Town in the Lodhrān *tahsīl* of Multān District, Punjab, situated in $29^{\circ} 37' \text{ N.}$ and $71^{\circ} 56' \text{ E.}$, on an old bed of the Beās known as the Bhatāri nullah, about 8 miles from the present right bank of the Sutlej. Population (1901), 5,552. Being built on undulating ground, it is more picturesque than most Punjab towns. The town is said to have been founded by Kailun, chief of Jaisalmer, at the end of the fourteenth century; its identification with the Karūr where Vikramāditya is said to have defeated the White Huns is extremely doubtful. The most remarkable building in the town is the shrine of Alī Sarwar, a Saiyid of Delhi, who came to Kahrur in 1204. The municipality was created in 1867. The income and expenditure during the ten years ending 1902-3 averaged Rs. 4,000. In 1903-4 the income was Rs. 4,300, chiefly from octroi; and the expenditure was Rs. 4,100. The town has a vernacular middle school, maintained by the municipality, and a dispensary. It is the trade centre for the Sutlej *tahsīls* of the District, dealing especially in wool, piece-goods, and wheat, and has a local reputation for the manufacture of coverlets of hand-printed cotton.

Kahūta.—Eastern *tahsīl* of Rāwalpindi District, Punjab, lying in the Lower Himālayas, between $33^{\circ} 18' \text{ and } 33^{\circ} 48' \text{ N.}$ and $73^{\circ} 15' \text{ and } 73^{\circ} 39' \text{ E.}$, with an area of 457 square miles. Its eastern border rests upon the Jhelum river. The whole of the *tahsīl* except the south-west corner lies in the hills, which in the north reach an elevation of over 6,000 feet. The population in 1901 was 94,729, compared with 92,372 in 1891. It contains 231 villages, of which Kahūta is the head-quarters. The land revenue and cesses amounted in 1903-4 to 1.2 lakhs.

Kalī.—Former *tālūk* of Bhīr District, Hyderābād State. See AMBATĀLUK.

Kall.—Ancient port in Tinnevely District, Madras. See KĀVAL.

Kallang.—Village in Kāngra District, Punjab. See KYELANG.

Kailwārā.—Town in Udaipur State, Rājputāna. See KELWĀRA.

Kaimganj Tahsīl.—North-western *tahsīl* of Farrukhābād District, United Provinces, comprising the *parganas* of Kampil and Shamsābād

West, and lying along the southern bank of the Ganges, between $27^{\circ} 21'$ and $27^{\circ} 43'$ N. and $79^{\circ} 8'$ and $79^{\circ} 37'$ E., with an area of 363 square miles. Population increased from 143,557 in 1891 to 168,606 in 1901. There are 397 villages and two towns: KAIMGANJ (population, 10,369), the *tahsīl* head-quarters, and SHAMSĀBĀD (8,375). The demand for land revenue in 1903-4 was Rs. 2,10,000, and for cesses Rs. 36,000. The density of population, 464 persons per square mile, is below the District average. The *tahsīl* contains a larger tract of lowland than any other in the District except Aligarh; but the greater part of it is situated in the uplands. The Bagār river winds through the southern portion, and on either bank stretches a wide expanse of sandy land, which extends on the north to near Kampil. North and west of this is a belt of fine yellowish loam, tilled by Kurmīs, and famous for its sugar-cane, and near the towns of Kampil, Kaimganj, and Shamsābād for its tobacco, which acquires a special flavour from the brackish water of the wells. The area under cultivation in 1903-4 was 226 square miles, of which 72 were irrigated. The Fatehgarh branch of the Lower Ganges Canal supplies irrigation through the centre of the uplands, and the area irrigated from canals is slightly larger than that supplied by wells. There are several considerable swamps, from which water is also taken; but a good deal has been done to improve the drainage.

Kaimganj Town.—Head-quarters of the *tahsīl* of the same name in Farrukhābād District, United Provinces, situated in $27^{\circ} 30'$ N. and $79^{\circ} 21'$ E., on the Cawnpore-Achhnerā Railway, and also at the terminus of a metalled road from Farrukhābād city. Population (1901), 10,369. It was founded in 1713 by Muhammad Khān, first Nawāb of Farrukhābād, who named it after his son, Kaim Khān. It is the centre of a group of villages inhabited by a colony of Pathāns who settled here early in the seventeenth century. The best known of these villages is Mau Rashidābād, now a great tobacco field, about a mile north of Kaimganj. The Pathāns of this neighbourhood are still noted for the number of men they supply to the native army. In 1857 the *tahsīl* was ineffectually besieged for a time by a band of fugitive insurgents from Kālpī. The town consists chiefly of a wide metalled bazar, about a mile long, from which branch many narrow unmetalled lanes. It contains a *tahsīl*, *munsī*, and dispensary. Kaimganj is administered under Act XX of 1856, with an income of about Rs. 2,000. There is a considerable trade in tobacco, which is largely grown in the neighbourhood. The old manufacture of swords and matchlocks has dwindled down to a trade in ordinary knives and betel-nut cutters. The town school has 193 pupils, and three primary schools 63.

Kaimur Hills.—The eastern portion of the Vindhyan range, commencing near Katangī in Jubulpore District of the Central Provinces

($23^{\circ} 26'$ N. and $79^{\circ} 48'$ E.). It runs a little north of east for more than 300 miles to Sasarām in Bihār ($24^{\circ} 57'$ N. and $84^{\circ} 2'$ E.). The range, after traversing the north of Jubbulpore District and the south-east of Maihar State, turns to the east and runs through Rewah territory, separating the valleys of the Son and Tons rivers, and continues into Mirzāpur District of the United Provinces and Shāhābād of Bengal. Its maximum width is 50 miles. In the Central Provinces the appearance of the range is very distinctive. The rock formation is metamorphic and the strata have been upheaved into an almost vertical position, giving the range the appearance of a sharp ridge. In places the range almost disappears, being marked only by a low rocky chain, and in this portion it never rises more than a few hundred feet above the plain. The range enters Central India at Jukehi in Maihar State ($23^{\circ} 29'$ N. and $80^{\circ} 27'$ E.), and runs for 150 miles in a north-easterly direction, forming the northern wall of the Son valley and overhanging the river in a long bold scarp of sandstone rock, from which near Govindgarh a branch turns off to the north-west. The range here attains an elevation of a little over 2,000 feet. In Mirzāpur the height of the range decreases in the centre, to rise again to over 2,000 feet at the rock of Bijaigarh with its ancient fort. Interesting relics of pre-historic man have been found in the caves and rock-shelters of the hills here, in the form of rude drawings and stone implements. In Shāhābād District the summit of the hills consists of a series of saucer-shaped valleys, each a few miles in diameter, containing a deposit of rich vegetable mould in the centre and producing the finest crops. The general height of the plateau is here 1,500 feet above sea-level. The sides are precipitous, but there are several passes, some of which are practicable for beasts of burden. The ruined fort of ROHTĀS is situated on these hills. The rocks throughout consist principally of sandstones and shales.

Kain.—River in Bundelkhand. See KEN.

Kaintira.—Village in Athmallik, one of the Orissa Tributary States, Bengal, situated in $20^{\circ} 43'$ N. and $84^{\circ} 32'$ E., on the north bank of the Mahānadi. Population (1901), 1,567. Kaintira is the principal village in the State and contains the residence of the chief.

Kaira District (*Kheda*).—District in the Northern Division of the Bombay Presidency, lying between $22^{\circ} 14'$ and $23^{\circ} 7'$ N. and $72^{\circ} 30'$ and $73^{\circ} 23'$ E., with an area of 1,595 square miles. It is bounded on the north by Ahmadābād District, Mahī Kāntha, and the small State of Bālāsīnor in the Rewā Kāntha Agency; on the west by Ahmadābād District and the State of Cambay; on the south and east by the river Mahī and the Gaikwār's territory (Baroda). The breadth of the District varies from 25 to 40 miles.

Excepting a small corner of hilly ground near its northern boundary,

and in the south-east and south, where the land along the Mahī is furrowed into deep ravines, Kaira forms one unbroken plain sloping gently towards the south-west. The north and north-east portions are dotted with patches of rich rice

Physical aspects.

land, broken by untilled tracts of low brushwood. The centre of the District, called the *charotar*, or 'goodly' land, is very fertile and highly cultivated; the luxuriant fields are surrounded by high-growing hedges, and the whole country is clothed with clusters of large shapely trees. Westward, this belt of rich vegetation passes into a bare though well-cultivated tract of rice land, growing more barren and open to the south till it reaches the maritime belt, whitened by a salt-like crust, on the Gulf of Cambay.

The MAHĪ, the largest river of Kaira, and the third in importance of the Gujarāt rivers, flows for nearly 100 miles along the east, south-east, and south boundary of the District. This 100 miles may be divided into three sections: first a stretch of 40 miles over a rough and rocky bed, then 10 miles of a still stream with a sandy bed, and lastly 45 miles of a tidal river. The fords in the District are at Kāvi, Dehvān, Gajna, Khānpur, and Ometa. At Verākhāndi, the limit of the flow of the tide, the bed is in the dry season 500 yards wide, the stream 120 yards, and the average depth $1\frac{1}{2}$ feet. A small 'bore' rises in the estuary at springs and dashes itself on the Dehvān. The SĀBARMATĪ, the fourth largest river in Gujarāt, flows for 14 miles along the western boundary, and is much used for irrigation. The Shedhi, the chief drainage line of the plain between the Mahī and the Sābarmatī, being charged with soda, is not adapted for irrigation. The Khāri, one of five smaller streams, waters a large area by means of canals and sluices, but fails at the end of the rice season, that is to say about November.

The District has not yet been geologically surveyed in any detail. The Kaira plain is, with the exception of the few sandy hills and rocks in Kapadvanj and Thāsra, a deep bed of alluvium, most of it the débris of the gneiss and metamorphic limestones of the Arāvalli Hills. In the raised tract along the banks of the Mahī, water is found only at a depth of from 80 to 110 feet. Away from the river, wells have their springs from 40 to 60 feet deep, rising through strata of earth mixed with limestone nodules, alternating with sand overlying layers of limestone. From this limestone, when tapped, water rises to within 25 feet of the surface. The age of these strata is not known. They may be Tertiary or Cretaceous. Formerly, in parts of the District, water was to be found at a higher level. Many old wells are said to have been made useless by the earthquake of 1819, which lowered all the springs from 5 to 10 cubits. In some cases deeper sinking has overcome the evil; in others, a fine stratum of quicksand makes farther cutting dangerous. The hot springs of Lasundra, 10 miles south-east of Kapadvanj, rise to

the surface in ten or twelve cisterns, the hottest reaching a temperature of 115°. Like those at Tuvā in Godhra, 20 miles to the south-east, and at Anāval, 150 miles south, the Lasundra springs are slightly sulphurous, and thought to be useful in skin diseases.

The District has no forests or forest lands, the trees either standing singly or in small groves. In the north the *mahuā* (*Bassia latifolia*), and in the south the mango and the *limbdo* or *nīm* (*Melia Azadirachta*), are the commonest kinds, while the custard-apple, *sitāphal* (*Anona squamosa*), is abundant all over the District. The *rāyan* (*Mimusops hexandra*), the *kanaj* (*Ulmus integrifolia*), the *karanj* or *kaniji* (*Pongamia glabra*), and the *aduso* (*Ailanthus excelsa*), also occur freely distributed. Mangoes are sent in considerable quantities to Baroda, Ahmadābād, and Kāthiāwār. During the hot season the fleshy corolla of the *mahuā* flower is eaten by the poorer classes and by cattle, and from it is distilled a favourite liquor. Mixed with whey, the berries of the *rāyan* form, during the hot season, the staple food of a large section of the Kolī population.

Tigers and leopards, which haunted the bed of the Mahī till a few years ago, are now rarely heard of, owing to the spread of tillage and their pursuit by European sportsmen. Hyenas, jackals, foxes, wild hog, antelope, gazelle, and hares are common. Of game-birds, snipe, quail, and many species of duck abound; while geese, bustard, partridge, and florican may occasionally be shot. Poisonous snakes are common. Mahseer and other fresh-water fish are caught in the waters of the larger rivers.

To Europeans the climate is trying. From November to March the air is pleasant and bracing. By the people of the District the *charotar* or central portion is considered healthy. The rainfall varies but slightly in different parts of the District. The annual fall is 38 inches in the Nadiād, Borsad, and Anand *tālukas*, while it averages about 34 inches over the whole District. The average temperature is 82°, the maximum being 116° and the minimum 43°.

Kaira District is made up partly of lands acquired from the Peshwā in 1802 by the Treaty of Bassein, partly of territory transferred by the Gaikwār of Baroda in 1803 and 1817. Rājputs

History.

reigned in Kaira from 746 to 1290, and, excepting perhaps Thāsra and Kapadvanj, the District formed part of the directly managed portions of ANHILVĀDA. At the end of the fourteenth century Kaira passed to the Muhammadan kings of Ahmadābād, and in 1573 was transferred to the Mughals. In 1720 the Marāthās appeared, and from that time to the fall of Ahmadābād in 1752 the District was the scene of perpetual struggles between the Marāthās and the Muhammadan viceroys. The Marāthās were victorious, and in 1753 the District was shared between the Peshwā and the Gaikwār.

Part of Kaira came into British possession in 1803, and the rest in 1817. Under the terms of the Treaty of Bassein (December 31, 1802), the Nāpād group of villages was handed over by the Peshwā. In 1803 the Gaikwār ceded Nadiād, Mātar, and Mahudha, as well as the fort and town of Kaira, for the maintenance of troops supplied by the British Government. Again, by treaty dated November 6, 1817, the Gaikwār ceded Mehmādābād, Alīna, Thāsra, Antroli, and half of the town and district of Petlād to provide for the payment of additional troops. At the same time, Kapadvanj and Bhālaj were received in exchange for the district of Bijāpur in Northern Gujarāt.

The territories acquired in 1803, together with Dholka, Dhandhuka, Rānpur, and Gogha, which now form part of Ahmadābād District, remained in charge of the Resident at Baroda from the date of their cession till May, 1805. During this time a European Assistant and native officers administered, according to local usage, the police and justice of the country. In 1805 a Collector was appointed, with jurisdiction over the ceded tracts, both those to the north of the Mahī and those to the west of the Gulf of Cambay. In the same year the town of Kaira was selected as a large military station. The increase in the British possessions consequent on the treaty of November, 1817, necessitated fresh administrative arrangements. The territory north of the Mahī was, from January 1, 1818, divided into the two Districts of Kaira and Ahmadābād. In 1830 Kapadvanj was included in Ahmadābād, and Kaira became a sub-collectorate under the Collector of Ahmadābād. In 1833 Ahmadābād and Kaira were again separated. Since then, more than once, villages have been transferred from one District to the other, and the original irregular groups and collections of villages have been gradually consolidated into seven *tālukas*.

Throughout the District are Hindu and Musalmān buildings of interest. The *rauza* of Mubārak Saiyid (died A. H. 966) at Sojālē is one of the finest of the latter. Kapadvanj contains some buildings of great antiquity: a beautiful arch described by Forbes in his *Rās Mālā*, a *kund* or basin of consecrated water, a mosque, and a well; and an underground temple of Mahādeo which has recently been explored for the first time. It is also remarkable for a fine Jain temple recently built.

In 1846 the population of Kaira District was returned at 566,513. By 1872 it had risen to 782,938. In 1881 the population was 805,005; in 1891, 871,794; and in 1901, 716,332.

Population.

The decrease of 18 per cent. during the last decade was due to the famine and cholera of 1899-1900. The District is divided into 7 *tālukas*, with area and population (1901) as given in the table on the next page.

The number of towns in the District in 1901 was 11, and of villages 598. The chief towns are NADIĀD, KAPADVĀNJ, KAIRA (the

head-quarters), ANAND, and MEHMAĀBĀD. Owing to the large fertile areas which the District comprises, it is the most thickly populated in the Presidency. The most populous *tālukas* are Nadiād, Borsad, and Anand. Gujarātī is the vernacular. Classified according to religion, Hindus in 1901 numbered 614,146, or 85 per cent. of the total; Muhammadans, 68,187, or 9 per cent.; Christians, 25,210; Jains, 8,469; and Pārsīs, 209.

<i>Tāluka.</i>	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Kapadvanj .	279	1	87	75,258	270	— 26	5,591
Mehmadābād .	171	2	66	75,926	444	— 18	7,007
Thāsra .	257	1	96	73,980	288	— 22	6,154
Mātar .	216	1	81	61,522	285	— 22	4,884
Nadiād .	224	2	91	148,452	663	— 13	16,099
Anand .	244	3	85	143,305	587	— 16	18,336
Borsad .	224	1	92	137,889	673	— 15	12,631
District total	1,595	11	598	716,332	449	— 18	70,702

The following castes are of importance: Brāhmins, 38,000; Vānīs, 22,000; Rājputs, 21,000; Chamārs, 13,000; Kunbīs (agriculturists), 127,000; Kolīs (agriculturists), 252,000; Dhers or Mahārs, 21,000. The Muhammadans include 16,000 Pathāns and 10,000 Bohrās.

The Lewa and Kādva Kunbīs are the best farmers in the District, and a sober, peaceable, and industrious race. The Kunbīs of certain villages are held in honour as descended from the leading men among the original settlers in Gujarāt. The Rājputs, with the exception of a few who, with the title of Thākur, still retain landed estates, have sunk into the mass of ordinary peasant proprietors. The Kolīs number 252,000, or 35 per cent. of the total population. Idle and turbulent under native rule, they are now quiet, hard-working, and prosperous. Among Hindu low castes, the Dhers are distinguished for industry and good behaviour. They formerly lived in comfort by weaving coarse cotton cloth, but the competition of the Bombay and local mills is now shutting them out of the market. Of the Musalmān population, about one-third, under the name of Saiyids, Shaikhs, Pathāns, and Mughals, represent the foreign conquerors of Gujarāt. The remainder, called Momnas, Bohrās, Tais, and Ghānchīs, are the descendants of Hindus converted to Islām under the Ahmadābād kings. Musalmāns of the first class, employed chiefly as cultivators or in Government service as police or messengers, are for the most part poor. Musalmāns of the second class are artisans, chiefly weavers and oil-pressers, and are hard-working and well-to-do. Most of the population is dependent on

agriculture, which supports 67 per cent. of the total. General labour supports 4 per cent., and the remainder are distributed between commerce and trade, personal service, &c. Over 15,000 are engaged in cotton-weaving.

At the Census of 1901 the native Christian population of the District was returned at 25,131, showing an increase of no less than tenfold since 1891. This may to some extent be the result of conversions to Christianity during the famine; but it is noteworthy that the Salvation Army has been active in Kaira for some years, and that a large number of the Christians are Salvationists, mainly converted from the lower classes. Besides the Salvation Army, the following missions are at work in the District: the Irish Presbyterian, with stations at Borsad and Anand, which maintains 2 Anglo-vernacular and 46 vernacular schools, 4 orphanages, and a hospital at Anand, and has settled 14 colonies of converts on waste land procured from Government; the Methodist Episcopal at Nadiād, which maintains 165 schools, an industrial school, an orphanage, and a dispensary, and which undertook extensive relief operations in the famine of 1900; the Christian Alliance in the Mātār *tāluka*, which maintains 9 schools and an orphanage and industrial school at Kaira; and the Roman Catholic at Anand, which maintains 19 schools, an industrial school, and an orphanage and dispensary. The Salvation Army maintains 112 schools and a well-equipped hospital at Anand, which is very popular among all classes. Khāsiyādi, 'the beautiful garden,' in Borsad town was the first to show a leaning towards Christianity, two families having been converted there in 1847. There is an English church at Kaira known as St. George's Church, established about 1825.

The soil belongs to four classes: light, medium, black, and alluvial, with subordinate varieties. The light soil is the most common, varying in quality from the loose-grained yellow sand of the fields near the Sābarmati and the Mahī, to a rich lighter mould common in the central *tālukas*, and found to perfection in the south-west corner of Mātār. The medium soil is fairly well distributed over the whole District. The black soil of Kaira is poor and generally contains either soda or limestone. Alluvial soil or *bhātha* is found near the Vātrak river and is a rich garden mould.

The greater part of the land of the District is *ryotwāri* (1,075 square miles, or 88 per cent. of the total area), about 7 per cent. being held on *udhad* or quit-rent tenure. The main statistics of cultivation in 1903-4 are shown in the table on the next page, in square miles.

The chief crops, with the area under each in square miles (1903-4), are: *bājra* (313), *kodra* (162), rice (115), *jowār* (91), and wheat (18).

Cotton is grown in small patches (10 square miles). The finest tobacco in Western India is grown in Kaira, occupying 24 square

miles, mostly in the Nadiād, Borsad, and Anand *tālukas*; but the cultivators, though skilful in rearing the plant, know nothing of its preparation for the European market. Two varieties of tobacco are grown, the *talabdi* or local plant and the *khāndeshi* or plant introduced from Khāndesh. An irrigated field yields twice as large a crop as a dry one. About the beginning of July, as soon as the first rain has fallen, the seed is sown on a well-prepared plot of ground, and after about a month and a half the seedlings are ready for transplantation. The field is scored in squares by a heavy, long-toothed rake, and at each point of intersection a seedling is set. The plant takes about five and a half months to ripen. As soon as it is ready, it is carefully examined, and divided into two classes, *kālio* and *jardo*; the *kālio* is cut down, stalk and all, and laid out to dry; the *jardo* is left a little longer, and then the leaves are stripped off the stem. A moth caterpillar is the chief enemy of the plant. Tobacco-growing is a costly process, and can be undertaken only by substantial cultivators. It has been calculated that the cost of growing an acre of plant is Rs. 270, and the profit Rs. 110. Cotton is grown only from the local plant, and occupies every seventh furrow in fields sown with ordinary grain crops.

<i>Tāluka.</i>	Total area.	Cultivated.	Irrigated.	Cultivable waste.
Kapadvanj . .	279	182	2	45
Mehmadābād . .	171	131	5	13 $\frac{1}{4}$
Thāśra . .	257	141	2	52
Mātar . .	216	141	3	34
Nadiād . .	224	191	10	6
Anand . .	244	196	42	22 $\frac{1}{4}$
Borsad . .	204	149	12	4
Total	1,595 *	1,131	37	153

* The area for which statistics are not available is 129 square miles.

Several attempts have been made to improve the Kaira cotton, but without success. Indigo was once one of the chief exports from Gujarāt, but by 1827 it had almost ceased to be produced. A later attempt to encourage the growth in Kaira was attended with failure. A Government silk garden was started in 1837, but was closed in 1847. The Nadiād Agricultural Association's small experimental farm has been removed to Kamta, and has practically been handed over to the department of Agriculture, which has enlarged its scope and is providing new buildings. Numerous experiments in the cultivation of tobacco and other staple crops of the District have been made. It has been ascertained in the course of these experiments that a better yield of tobacco is obtained by growing it continuously instead of in rotation, that deep tillage increases the out-turn, and that Sumatra tobacco

cannot be grown. The *desi* or local tobacco stands first in quality and quantity, and the Belgaum varieties second. In the ten years ending 1903-4, a total of 19·8 lakhs was advanced to cultivators under the Land Improvement and Agriculturists' Loans Acts, of which 7·7 lakhs was lent in 1899-1900, and 8·8 lakhs in 1900-1.

Cattle are imported from Kāthiāwār and Kānkrej in Northern Gujārāt. Some of the largest used to be bred in the District at Bhālaj, and many villages of the Nadiād *tāluka* are famous for their bullocks. Ponies are bred in the District, but they are not suitable for cavalry remounts. Two Government pony stallions are maintained by the Civil Veterinary department.

Of the total cultivated area of 1,131 square miles, 37 square miles, or 3 per cent., were irrigated in 1903-4. The chief sources of irrigation are 11 minor works, 10,886 wells, and 1,391 tanks. The wells most commonly in use are deep, shallow wells being found only in the Mātar *tāluka*. The water is drawn up by bullocks in four leathern bags working simultaneously. The ponds are used for irrigating rice lands. After the close of the cold season few of them hold any large supply of water. The Khāri sluice system irrigated nearly 8,800 acres in 1903-4. In 1902 large reservoirs were constructed at Gobljaj, Tranja, Nagrama, and Vangroli by famine labour.

Iron ore was at one time worked in the neighbourhood of Kapadvanj. In the bed of the Mājam river, about 15 miles from Kapadvanj, are found varieties of agate and moss-stone. The bed of the Mahi contains masses and boulders of trap; while on its upper course, on the Bālāsīnor frontier, rock is plentiful, including trap, with occasional limestone, quartz, and granite.

The opening of steam factories at Ahmadābād and at Nadiād has greatly reduced the demand for hand-spun cotton, once a staple. The water of the District is thought to be especially good for dyeing purposes. Soap and glass are manufactured at Kapadvanj. A steam spinning-mill, established at Nadiād in 1876 at a cost of about 5 lakhs, has 14,568 spindles, which turn out over a million pounds of yarn, and employ 584 persons. Considerable quantities of coarse cloth for home consumption are woven in hand-loom by the lower castes of Hindus. In the larger towns calico printing is carried on by classes known as Bhavsārs and Chhipas.

The chief exports are prints, grain, tobacco, butter, oil, and *mahnā* flowers; the chief imports are piece-goods, grocery, molasses, and dye-stuffs. Kaira is particularly noted for its *ghī* or clarified butter, the export of which is valued at 8 lakhs. The *ghī* when made is forced into large leathern bottles holding from 60 to 200 lb.

In 1884 there was only one made road in the District. There are

now 166 miles of metalled and 19 of unmetalled roads. Of the former, 33 miles of Provincial roads and 123 miles of local board roads are maintained by the Public Works department. All the water-courses are bridged except the large rivers, and avenues of trees are maintained along 49 miles. New roads were constructed by famine labour in 1900 from Mehmadābād to Dākōr and from Borsad to Agas railway station. The whole of the District is connected with Ahmadābād city by metalled roads. The main line of the Bombay, Baroda, and Central India Railway passes through the District from north to south for 38 miles, and a branch line from Anand runs through the Pānch Mahāls to Godhra, where it connects with the Godhra-Ratlām Railway, traversing the District for 34 miles. In 1890 another branch line was opened from Anand to Petlād in Baroda territory, and thence in 1901 to Cambay town, thus bringing Kaira into close connexion with the sea. This line traverses the District for 6 miles. Ferries ply across the Mahī.

A severe famine took place in 1791-2, when rain fell only once; in 1813-4 there were only two showers of rain throughout the year; in 1825 the later rains failed, and remissions of land revenue to the amount of over 1½ lakhs were granted.

Famine.

On the other hand, the period 1814-22 was marked by heavy floods and rainfall that caused much damage to the country. In 1834 locusts ate up the crops, and remissions amounting to nearly 2 lakhs were sanctioned. In 1837, 1868, and 1871 disastrous storms swept over the District. During the forty years 1836-76, though the rainfall had at times been scanty and the crops failed, no season of famine or even of general scarcity occurred in Kaira. Owing to the scanty rainfall in 1877 (19.13 inches), there was a partial failure of crops, and the poorer people, especially in the Kapadvanj and Thāsra *tālukas* in the north-east, suffered some distress, which, however, did not leave behind serious results. In 1899 the monsoon failed and the District was visited by severe famine. In April of the following year nearly 85,000 persons, exclusive of 8,000 dependants, were on relief works, and 15,000 more received gratuitous relief. The number increased to 143,000 by July of the same year, excluding 13,000 dependants and 38,000 on gratuitous relief. The latter reached a maximum of 113,000 in August. It is calculated that there was, during the three years 1900-2, an increase of 112,464 deaths over the yearly average. The loss of cattle in the year 1899-1900 amounted to 233,000. The cost of relief measures in the District, including the Pānch Mahāls, was over 88 lakhs. Remissions of land revenue to the amount of 35 lakhs were granted in these two Districts. The loans granted to agriculturists in Kaira alone amounted to 19 lakhs.

The District is divided into two subdivisions, in charge of an

Assistant Collector and a Deputy-Collector respectively, and is composed of the seven *tālukas* of ANAND, BORSAD, **Administration.** KAPADVANJ, MĀTAR, MEHMADĀBĀD, NADIĀD, and THĀSRA. The Collector is *ex-officio* Political Agent for Cambay State and Additional Political Agent for Rewā Kānthā.

For judicial purposes the District is included in the jurisdiction of the Judge of Ahmadābād. There are 5 Subordinate Judges for civil work, and 23 officers, including a bench of magistrates, to administer criminal justice. The common offences are murder in Borsad and Anand, and house-breaking, burglary, cattle-stealing, and thefts elsewhere.

In 1803, when Kaira was ceded to the British, the District afforded examples of various forms of land revenue administration. In the centre were three kinds of villages: *rāsti* or peaceable, *mehwās* or refractory, and an intermediate class of *rāsti-mehwās* villages. The refractory villages were occupied by the turbulent descendants of the Rājput and Koli warriors. Here Koli *thākurs* or chiefs administered despotically their little clusters of huts. Revenue was demanded but seldom paid. The peaceable villages were mostly grants from Government to those who had done some public service. The most important Muhammadan grants were called *mīlikī*, and were held rent-free. Internal administration was the concern of the village community. There were four forms of village government, the commonest being that by which the village headman engaged annually for the payment of a certain sum to Government. The profits of a good year, under this the most simple and general system, went to the headman; on the other hand, the headman had to bear any loss from failure of crop or short tillage. Above the headman or *pātel* were the revenue-farmers (*kamāvisdār*), who fixed the village contributions; and below the headmen were the cultivators and coparceners of the village. A class quite apart, called *manotidārs*, or money-lenders, arose as sureties for the payment of the revenue. This short statement furnishes an outline of the Marāthā revenue system. It had the merit of simplicity and was calculated to ensure the recovery of revenue. At the same time it is clear that it was productive of abuses and suffering to the cultivating classes. When the District was taken over by the British in 1803, the system was continued with but small modification until 1862. In that year the revenue survey system, which deals directly with individual cultivators, was introduced. The result of the survey assessment was to increase the land revenue demand from $11\frac{1}{2}$ to $13\frac{1}{4}$ lakhs, or by 11 per cent. In 1894 a resettlement was undertaken and completed in 1896, which further enhanced the total revenue by 17 per cent. The average rates of assessment are: 'dry' land, Rs. 3-7 (maximum Rs. 6-12, minimum Rs. 1-8); rice land, Rs. 5-11 (maximum Rs. 6-12,

minimum Rs. 1-8); garden land, Rs. 9-9 (maximum Rs. 7, minimum Rs. 5).

Collections of land revenue and total revenue have been as follows in recent years, in thousands of rupees :—

	1880-1.	1890-1.	1901-2.	1903-4.
Land revenue . . .	19,69	19,52	10,34	18,31
Total revenue . . .	21,65	20,06	10,69	20,73

Of the Government villages, 88 are held on the *narvādāri* tenure. The peculiarity of this tenure is that it involves joint responsibility for the payment of the Government revenue. In *narvādāri* villages the *pātidārs* or sharers belong to the Kunbī caste, and on account of being *narvādārs* hold a high position among their fellows, being the descendants of the old proprietary cultivators. This tenure has been preserved by Act V of 1862 of the Bombay Government, but the land tax is levied at survey rates on the whole arable land. The villages on the banks of the river Mahī held on the *mehwāsī* tenure, pay their revenue in a lump sum. A clan of Musalmān yeomen, known as the Māliks, have for nearly 400 years held 27 villages on a special tenure.

The District contains 10 municipalities: namely, KAIRA, KAPADVANJ, MEHMADĀBĀD, NADIĀD, DĀKOR, BORSAD, ANAND, UMRETH, OD, and MAHUDHA. The District board was established in 1863, and there are 7 *tāluka* boards. The total expenditure of all these boards in 1903-4 was 2½ lakhs, of which half a lakh was spent on roads and buildings. The chief source of income is the land cess.

The District Superintendent of police has the assistance of 2 inspectors and 10 chief constables. There are 12 police stations. The force in 1904 numbered 555 men, working under 133 head constables. Six mounted police under one *daffadār* were also maintained. There are 8 subsidiary jails in the District, with accommodation for 187 prisoners. The daily average prison population in 1904 was 36, of whom 2 were females.

The District stands fourth among the Districts of the Presidency in the literacy of its population, of whom 9.9 per cent. (17.9 males and 0.9 females) were able to read and write in 1901. In 1855-6 there were only 7 schools attended by 1,036 pupils; by 1876-7 the number of schools had risen to 189 and the number of pupils to 14,720. In 1881 there were 205 schools with 16,107 pupils, who increased to 27,261 by 1891, and numbered 27,911 in 1901. In 1903-4 the District contained 365 schools, of which 84 were private, attended by 17,474 pupils, including 2,581 girls. Besides one high school, there were 14 middle and 266 primary schools. Of the 281 public institutions, one is managed by the Educational department, and 246 by

local or municipal boards, while 30 are aided and 4 unaided. The total expenditure on education in 1903-4 was Rs. 1,85,000, of which Rs. 23,000 was derived from fees. Of the total, 79 per cent. was devoted to primary schools.

In 1904 the District had one hospital and 8 dispensaries, with accommodation for 94 in-patients. The number of patients treated in 1904 was 110,069, including 1,122 in-patients; and 3,675 operations were performed. The expenditure was Rs. 21,000, of which Rs. 15,000 was met from Local and municipal funds. The Irish Presbyterian and Salvation Army Missions have each opened a dispensary at Anand, to which hospitals are shortly to be added.

The number of persons successfully vaccinated in 1903-4 was 17,000, representing a proportion of 24 per 1,000, which is slightly below the average for the Presidency.

[Sir J. M. Campbell, *Bombay Gazetteer*, vol. iii, Kaira and Pānch Mahāls (1879).]

Kaira Town (*Kheda*).—Head-quarters of Kaira District, Bombay, situated in 22° 45' N. and 72° 41' E., 7 miles south-west of Mehmād-ābād station on the Bombay, Baroda, and Central India Railway, and 20 miles south-west of Ahmadābād. Population (1901), 10,392. Kaira is a very ancient place, having a legendary connexion with the Mahā-bhārata, and is proved by the evidence of copperplate grants to have existed as early as the fifth century A.D. Early in the eighteenth century it passed to the Bābi family, with whom it remained till 1753, when it was taken by the Marāthās under Dāmājī Gaikwār. It was finally handed over to the British by Anand Rao Gaikwār in 1803. Its frontier position rendered Kaira important; and a force of infantry, cavalry, and artillery was stationed there until the transfer, in 1830, of the frontier station to Deesa. The climate is said to have improved of late years. Earthquake shocks were felt in 1860 and 1864. The courthouse is a handsome building with Greek pillars. Near it is a part of the old jail, in 1814 the scene of a riot in which the prisoners rose, and which was only suppressed with a loss of 19 killed and 12 wounded. The municipality was established in 1857, and its income during the decade ending 1901 averaged Rs. 15,000. In 1903-4 the income was Rs. 18,000, chiefly from a house and land tax. Besides the Government revenue offices, the town contains a Sub-Judge's court, a civil hospital, and 6 schools (5 for boys and one for girls), attended by 543 male and 82 female pupils. The boys' schools include an English school with 92 pupils.

Kairāna Tahsil.—North-western *tahsil* of Muzaffarnagar District, United Provinces, lying between 29° 19' and 29° 42' N. and 77° 2' and 77° 30' E., with an area of 464 square miles. It comprises five *par-ganas*—Kairāna, Jhinhāna, Shāmli, Thāna Bhawan, and Bidauli—and

was formerly known as Shāmlī. Population increased from 200,157 in 1891 to 224,679 in 1901. The *tahsīl* contains five towns: namely, KAIRĀNA (population, 19,304), the head-quarters, THĀNA BHAWAN (8,861), SHĀMLI (7,478), JALĀLĀBĀD (6,822), and JHINJHĀNA (5,094); and 256 villages. In 1903-4 the demand for land revenue was Rs. 3,86,000, and for cesses Rs. 50,000. The river Jumna forms the western boundary, and the adjoining tract lies low and is intersected by *jhils* and watercourses. The eastern half of the *tahsīl* is, however, part of the upland tract and is irrigated by the Eastern Jumna Canal. In 1903-4 the area under cultivation was 291 square miles, of which 131 were irrigated.

Kairāna Town.—Head-quarters of the *tahsīl* of the same name in Muzaffarnagar District, United Provinces, situated in $29^{\circ} 24' N.$ and $77^{\circ} 12' E.$ It is the terminus of a metalled road from Muzaffarnagar town. The population is increasing slowly and was 19,304 in 1901. Mukarrab Khān, physician to Jahāngīr and Shāh Jahān, received the town and surrounding country as a grant. He built a *dargāh* and laid out a beautiful garden with a large tank, and the town also contains several mosques dating from the sixteenth and seventeenth centuries. Kairāna is built partly on the low-lying Jumna *khādar* and partly on the rising slope to the upland plain, and has a clean, well-paved bazar. The town was constituted a municipality in 1874. During the ten years ending 1901 the income and expenditure averaged Rs. 12,000. In 1903-4 the income was Rs. 16,000, chiefly derived from octroi (Rs. 12,000); and the expenditure was Rs. 18,000. Ornamental curtains are made here by pasting small pieces of looking-glass on coloured cloth. There is a considerable amount of traffic in grain with both the Punjab and the railway, and a small calico-printing industry. Besides the *tahsīlī*, there are a *munsifi*, a dispensary, and two schools.

Kaisarganj.—South-western *tahsīl* of Bahraich District, United Provinces, comprising the *parganas* of Fakhrpur and Hisāmpur, and lying between $27^{\circ} 4'$ and $27^{\circ} 46' N.$ and $81^{\circ} 16'$ and $81^{\circ} 46' E.$, with an area of 679 square miles. Population increased from 332,193 in 1891 to 348,172 in 1901. There are 647 villages, but no town. The demand for land revenue in 1903-4 was Rs. 3,29,000, and for cesses Rs. 75,000. The density of population, 513 persons per square mile, is considerably above the District average. The *tahsīl* lies in the wide valley of the Gogra, and is scored by many old channels, the chief of which are the Sarjū or Suhelī and the Tirhī. The whole area is fertile, except where the Gogra has deposited sand, and irrigation is rarely needed. In 1903-4 the area under cultivation was 443 square miles, of which only 13 were irrigated.

Kaithal Tahsīl.—Western *tahsīl* and subdivision of Karnāl District,

Punjab, lying between $29^{\circ} 22'$ and $30^{\circ} 12'$ N. and $76^{\circ} 11'$ and $76^{\circ} 47'$ E., with an area of 1,289 square miles. The population in 1901 was 265,189, compared with 257,493 in 1891. It contains the towns of KAITHAL (population, 14,408), the head-quarters, and PŪNDRI (5,834); and 413 villages, including PEHOWA, a place of religious importance. The land revenue and cesses amounted in 1903-4 to 2.7 lakhs. The *tahsīl* consists chiefly of the petty principality of Kaithal, which escheated in 1843. North of the Ghaggar, the country is undulating and the soil contains a considerable proportion of sand. The tract between the Ghaggar and the southern limits of the Saraswati depression consists of vast prairies, flooded during the rains and interspersed with numerous trees and patches of cultivation. This tract, known as the Naili (Nāli), is notoriously unhealthy, but the pasture it affords is invaluable in dry years. The southern half of the *tahsīl* is a level plain, now irrigated by the Western Jumna Canal. On the east is the Nardak. The people have not yet entirely abandoned their pastoral traditions, and large tracts are still used for grazing alone. Farther west, cultivation becomes more general, and in the extreme south-west the soil contains a large proportion of sand.

Kaithal Town.—Head-quarters of the subdivision and *tahsīl* of the same name in Karnāl District, Punjab, situated in $29^{\circ} 48'$ N. and $76^{\circ} 24'$ E., 38 miles west of Karnāl town, and the terminus of the Kaithal branch of the Southern Punjab Railway. Population (1901), 14,408. Kaithal is picturesquely situated on an extensive tank, which partly surrounds it, with numerous bathing-places and flights of steps. It lies in KURUKSHETRA, and is said to have been founded by the hero Yudhishtira. It bore in Sanskrit the name of Kapisthala, or the 'abode of monkeys,' and possesses an *asthān* or temple of Anjñi, mother of Hanumān, the monkey god. During the time of the earlier Muhammadan emperors it was a place of some importance, and Tīmūr, who says its inhabitants were fire-worshippers, halted here before he attacked Delhi in 1398. The tombs of several saints, the oldest of which is that of the Shaikh Salāh-ud-dīn of Balkh (A.D. 1246), show that it was a centre of Muhammadan religious life. The town was renovated, and a fort built, under Akbar. In 1767 it fell into the hands of the Sikh chief, Bhai Desu Singh, whose descendants, the Bhaïs of Kaithal, ranked among the most powerful of the Cis-Sutlej chiefs. Their territories lapsed to the British Government in 1843, when Kaithal became the head-quarters of a District; but in 1849 this was absorbed into Thānesar District, which was in turn included in that of Karnāl in 1862. The now somewhat dilapidated fort or palace of the Bhaïs stands out prominently on the bank of the tank. The municipality was created in 1867. The income and expenditure during the ten years ending 1902-3 averaged Rs. 19,900 and Rs. 20,400 respectively.

In 1903-4 the income was Rs. 15,800, chiefly derived from octroi; and the expenditure was Rs. 17,400. It maintains a dispensary and an Anglo-vernacular middle school. Saltpetre is refined at Kaithal, and it has a considerable manufacture of lacquered wood, besides two cotton factories, one for ginning and the other for ginning and pressing. The number of employés in the factories in 1904 was 103.

Kākar.—*Tāluka* of Lārkāna District, Sind, Bombay, lying between $26^{\circ} 53'$ and $27^{\circ} 14'$ N. and $67^{\circ} 12'$ and $67^{\circ} 57'$ E., with an area of 445 square miles. The population in 1901 was 49,252, compared with 47,888 in 1891. The *tāluka* contains 73 villages, of which Khairpur Nathan Shāh is the head-quarters. The density, 111 persons per square mile, is slightly below the District average. The land revenue and cesses in 1903-4 amounted to 2.1 lakhs. The *tāluka* depends for irrigation on the Western Nāra Canal, but suffers from its position at the lower end of the canal, the waters of which are largely exhausted by the northern *tālukas*. The western portion depends upon rain and a few hill-torrents for cultivation. *Jowār* is the principal crop.

Kākorā.—Village in the District and *tahsil* of Budaun, United Provinces, situated in $27^{\circ} 53'$ N. and $79^{\circ} 3'$ E., near the bank of the Ganges, 12 miles south-west of Budaun town. Population (1901), 2,941. The place is noted for a religious and trading fair held at the full moon of Kārtik (October–November), which is attended by as many as 100,000 to 200,000 persons, who come from all parts of Rohilkhand, as well as from Delhi, Muttra, and Cawnpore. The principal object is bathing, but a good deal of trade is carried on in cloth, metal goods, leather, and cattle. The actual site of the fair varies within a few miles according to the movements of the river.

Kākori.—Town in the District and *tahsil* of Lucknow, United Provinces, situated in $26^{\circ} 52'$ N. and $80^{\circ} 48'$ E., near a station on the Oudh and Rohilkhand Railway. Population (1901), 8,933. Kākori is said to have been originally inhabited by Bhars and was subsequently included in BAISWĀRĀ. It was granted to Muhammadans by Husain Shāh of Jaunpur. Several tombs of noted saints are situated in the town and its environs. Some of the Shaikh families residing here are of antiquity and position, and their members include many of the Lucknow pleaders, who have adorned the town with well-built houses, while others are engaged in Government service. Kākori is administered under Act XX of 1856, with an income of about Rs. 1,300. There are two schools with about 110 pupils.

Kakrālā.—Town in the Dātāganj *tahsil* of Budaun District, United Provinces, situated in $27^{\circ} 53'$ N. and $79^{\circ} 12'$ E., 12 miles south of Budaun town. Population (1901), 5,954. The name is said to have been derived from *kankar* or nodular limestone, which is largely found in the neighbourhood. In April, 1858, General Penny defeated near

Kakrālā a party of Ghāzīs or fanatical Musalmāns, who were lying in ambush for him. This victory put an end to the rebel government which had ruled at Budaun for eleven months. The town contains a *sarai*, and a branch of the American Methodist Mission. It is administered under Act XX of 1856, with an income of about Rs. 1,000. The primary school has 75 pupils.

Kālābāgh.—Small cantonment in Hazāra District, North-West Frontier Province, situated in $34^{\circ} 6' N.$ and $73^{\circ} 25' E.$, on the road between Abbottābād and Murree. During the summer months it is occupied by one of the British mountain batteries which are stationed at Rāwalpindi in the winter.

Kālābāgh Estate.—Estate in the District and *tahsil* of Mīānwālī, Punjab, with an area of 107 square miles. It is held by Muhammad Khān Malik Yār, the Awān Malik of Kālābāgh. Over 300 years ago the Awān Maliks settled at Dhankot, a natural fastness on the Indus above Kālābāgh. They forced the Bhangi Khel Khattaks of the hills on the north to pay tribute, and at the close of the eighteenth century were recognized as chiefs of the Kālābāgh territory by 'Tīmūr Shāh Durrāni. The Sikhs annexed the estate in 1822, but Malik Allah Yār Khān retained it as their feudatory. He assisted Lieutenant (afterwards Sir Herbert) Edwardes to construct the Dalipnagar fort at Bannu, and his son Muzaffar Khān was taken prisoner there by the Sikhs in the second Sikh War. During the Mutiny he raised 100 men and was entrusted with the charge of one of the gates of Peshāwar city, receiving the title of Khān Bahādur as a reward. The present Malik, Yār Muhammad Khān, succeeded in 1885. He holds a *jāgīr* worth Rs. 6,000, and his income is about Rs. 22,000 a year, of which Rs. 1,000 is derived from the manufacture of alumi.

Kālābāgh Town.—Town in the Isa Khel *tahsil* of Mīānwālī District, Punjab, situated in $32^{\circ} 58' N.$ and $71^{\circ} 33' E.$ Population (1901), 5,824. The town is picturesquely situated at the foot of the Salt Range, on the right bank of the Indus, at the point where the river debouches from the hills, 105 miles below Attock. The houses nestle against the side of a precipitous hill of solid rock-salt, piled one upon another in successive tiers, the roof of each tier forming the street which passes in front of the row immediately above. Long before the British annexation of the Punjab, Kālābāgh was famous for its salt; and some of the wonders told of it by travellers as long ago as 1808 may still be seen in its houses built of and on rock-salt, its roads cut out of the solid salt rock, and its immense exposures of salt, sometimes closely resembling alabaster. The Kālābāgh hills are a continuation of the cis-Indus portion of the Salt Range, but are remarkable for the quantity of salt exposed, and the purity, closeness of grain, and hardness of a great proportion of it. Unlike the operations elsewhere in

the Salt Range, which are purely mining, the salt is here quarried at the surface. There are twelve quarries, some situated on the right bank of the Indus, and some on the right bank of the Lūn Nullah, which runs into the Indus on its right bank, at the base of a hill known as the Saudāgar hill. Enormous quantities of salt lie exposed here, underlying Tertiary strata, in workable seams of from 4 to 20 feet thick, alternating with seams of impure salt and marl. The deposits rise to a height of about 200 feet above the bed of the Gor gorge, the seams striking south to north and dipping to the west at an angle of about 70°. The salt is slightly better in quality than that of the Mayo and Warcha Mines, and is in high favour with traders; but it is handicapped in competition with those salts, because the Indus lies between it and the Māri station of the Kundiān-Campbellpore Railway. The quarries lie from half a mile to a mile from the sale *dépôt* at Kukrānwāla Vandah on the right bank of the Indus, where the miners deliver the salt at the rate of Rs. 4.2 per 100 maunds. The whole of the operations connected with the salt up to the time that it is deposited in store in the *dépôt* are in the hands of the miners. At the *dépôt* the salt is weighed out to purchasers and cleared under the supervision of the inspector in charge. The total quantity issued in 1903-4 amounted to 191,750 maunds, of which 150,062 maunds were removed by rail and 32,161 by river. Alum also occurs in the neighbouring hills, and forms a considerable but decreasing item of local trade, the out-turn in 1904 being about 3,500 maunds, which sold for Rs. 3 per maund (82½ lb.). The town possesses a manufacture of striped cloth (*sūsi*), and of iron instruments and vessels from metal imported from the Kānigoram hill.

The municipality was created in 1875. The income and expenditure during the ten years ending 1902-3 averaged Rs. 7,100 and Rs. 6,600. In 1903-4 the income was Rs. 5,600, chiefly derived from octroi; and the expenditure was Rs. 6,700. The town contains a dispensary and a municipal primary school. An Awān family, which resides in Kālābāgh, has a certain supremacy over the whole of the tribesmen, the representative of the family bearing the title of Malik.

Kalabgūr.—*Tālūk* in Medak District, Hyderābād State, with an area of 432 square miles. The population in 1901, including *jāgīrs*, was 78,052, compared with 96,100 in 1891, the decrease being due to emigration and transfer of villages. The *tālūk* contains one town, SADASEOPET (population, 6,672); and SANGAREDDIPET (4,809) is the head-quarters of the District and *tālūk*. There are also 144 other villages, of which 60 are *jāgīr*. The land revenue in 1901 was 2.4 lakhs. Kalabgūr is well supplied with tanks, and rice and sugar-cane are largely cultivated. The Nizām's State Railway passes through its southern portion, and the river Mānjra flows through the north.

Kālā-Chitta.—Mountain range in the Pindi Gheb *tahsīl* of Attock District, Punjab, having the general form of a wedge or triangle, whose base rests upon the left bank of the Indus, near the township of Nāra, while its apex stretches to the Margala pass, about 50 miles to the eastward. The broadest portion has a depth of about 12 miles. The range is formed of two portions differing much in appearance. The south-western part, stretching for 35 miles from the Indus through the Pindi Gheb *tahsīl*, known as the Kālā Pahār or 'black mountain,' is generally formed of very dark sandstone, often quite purple in hue, and sometimes blackened by exposure to the weather. Mixed with this are grey sandstone and red clay. The Chitta or 'white' hill runs the whole length of the northern side of the range. It is formed of white Nummulitic limestone, but dark limestone also crops up in its midst; it is by far the more valuable part of the range, the limestone being used for burning, and the forest produce being far better than in the Kālā. Bushes of acacia and wild olive are scattered over its rugged sides, but on the main portion a coarse grass forms the only vegetation.

Kaladan.—River of Burma, which rises in the Chin Hills in the Yahow country, and is there known as the Boinu. Its course at first is southwards, then northwards. Bending westwards, it passes through a portion of the Lushai Hills, and then turning south again, enters Northern Arakan at its northern end, and flows down the western side of the District, past Paletwa, the head-quarters, which lies on its western bank. Farther south it enters Akyab District and, continuing in a southerly direction, empties itself after a course of nearly 300 miles into the Bay of Bengal at Akyab, where its estuary is 6 miles in breadth. It is a picturesque river, navigable for steam traffic as high as Paletwa, nearly 100 miles from the sea. Its principal tributaries are the Dalet, Palet, Mi, and Pi.

Kālādgi.—Village in the Bāgalkot *taluka* of Bijāpur District, Bombay, situated in 16° 12' N. and 75° 30' E., on the right bank of the Ghatprabha river, 15 miles west of Bāgalkot on the Southern Mahratta Railway. Population (1901), 4,946. Kālādgi was formerly the chief station of the District and a cantonment. The municipality, established in 1866, was abolished after the removal of the head-quarters in 1885.

Kālāhandī.—Feudatory State in Bengal, lying between 19° 3' and 20° 28' N. and 82° 32' and 83° 47' E., and formerly known as Karond. It is bounded on the north by the Patnā State, on the north-west by Raipur District, and on the east, south-east, and south-west by the Jeypore *samīndāri* of Vizagapatam District. The area of the State is 3,745 square miles; and its head-quarters are at Bhawāni Patnā, a village of 4,400 inhabitants, 140 miles from Sambalpur and 130 from

Chicacole station on the East Coast Railway. From the north-east to the south-west of the State runs an almost continuous range of hills, a part of the Eastern Ghāts, with several peaks approaching 4,000 feet in elevation. To the north of this range lies a stretch of comparatively open country interspersed with low hills. The uplands are generally well wooded, except in tracts where the forest has been burnt off for cultivation. The Indrāvati river rises in the south of the State and passes into Bastar after a short course through the hills. The open country is drained by the Tel river and its affluent the Hatti.

The ruling family are Nāgvansi Rājputs, and are said to be connected with the Satrangarh Rājās of Chotā Nāgpur. The State appears to have existed from a remote period without being subject to any definite suzerainty. The payment of tribute and acknowledgement of their supremacy were, however, imposed by the Marāthās. In 1878 the chief, Udit Pratāp Deo, obtained an hereditary salute of 9 guns. In 1881, on the death of Udit Pratāp Deo, discontent broke out among the primitive Khond tribe, who form a large proportion of the population. The late Rājā had encouraged the immigration of members of the Koltā caste, who are excellent agriculturists and keenly acquisitive of land; and many of the Khond headmen and tenants had been ousted by them. The smouldering grievances of the Khonds had been suppressed by Udit Pratāp, but they now found expression in acts of plunder. A British officer was dispatched to Kālāhandī to inquire into their complaints, and a settlement was arrived at, which it was thought would prove satisfactory. These hopes, however, were illusory; and in May, 1882, the Khonds rose and slaughtered more than 80 Koltās, while 300 more were besieged in the village of Norlā, the Khonds appearing with portions of the scalps and hair of the murdered victims hanging to their bows. On the arrival of a body of police, which had been summoned from Vizagapatam, they dispersed, and the outbreak was soon afterwards suppressed, seven of the ringleaders being arrested, tried, and hanged. A settlement was made of the grievances of the Khonds, and the tranquillity of the State has not again been disturbed. The next chief, Raghu Kishor Deo, was installed in 1894 on attaining his majority, but was murdered in 1897 by a servant. He left an infant son of two years of age, Brij Mohan Deo, who is now being educated at Bhawāni Patnā. During his minority the management of the State is in charge of a Political Agent subordinate to the Commissioner of Orissa.

The population in 1901 was 350,529, having increased by 7 per cent. during the previous decade. The number of inhabited villages is 2,198, and the density of population 94 persons per square mile. About 81 per cent. of the population speak Oriyā and 15 per cent. Khondi, the language of the Khond tribe. Khonds number 103,000,

or 29 per cent. of the total; and next to them the most numerous castes are Gahrās or Ahīrs, Doms, a menial caste of sweepers, and Gonds. There is a very slight sprinkling of Telugu castes.

Along the base of the hills is found a light alluvial soil, fertile and easily tilled, and yielding good crops of almost any grain. The open country is covered by black cotton soil mixed with limestone nodules and with the yellow clay or gravel formed from metamorphic rock. The hilly country on the south and east, amounting to 62 per cent. of the whole State, has not been surveyed. Of the remaining land, 632 square miles, or 45 per cent. of the available area, are occupied for cultivation, and 437 were cultivated in 1904. The staple crops are rice, covering 285 square miles; *til*, 68; and *kodon* and *kutki*, 22. The State contains 1,464 tanks, from which 289 square miles can be irrigated. The numerous streams flowing from the hills also afford natural irrigation to land lying on their banks, and soil in this position gives two crops in the year. Oranges and plantains are grown on irrigated land. The prevailing forest tree in the north of the State is *sāl* (*Shorea robusta*), teak being rare and local. With the *sāl* are associated the other common trees of Peninsular India. Farther to the south between the Tel and Indrāvati, where a range of hills intervenes, the *sāl* disappears and *sāj* (*Terminalia tomentosa*) is the commonest tree. Owing to the distance of the forests from the railway, exports of timber are inconsiderable. No minerals are worked, but graphite occurs in veins and pockets in the metamorphic rocks. The State contains 48 miles of gravelled and 116 of embanked roads. The principal routes are those from Bhawāni Patnā to Raipur, and to Sambalpur through Bolāngir in Patnā, and from Jūnāgarh to Rājīm through Deobhog. Exports are sent principally to Raipur and the Madras Presidency, while imports are received from Raipur, Sambalpur, and Madras.

The total revenue in 1904 was Rs. 1,11,000, the principal items being land revenue and cesses, Rs. 59,000; forests, Rs. 14,000; and excise, Rs. 24,000. The unsurveyed territory on the south and east is comprised in six minor *zamīndārī* estates, and a hilly tract called Dongurlā, mainly occupied by Khonds who practise shifting cultivation. The revenue paid by the *zamīndārs* is Rs. 3,500. Two of the *zamīndārī* families are related to the chief. The remaining area has been cadastrally surveyed and a settlement effected. The taxation of land is about 8 annas per cultivated acre. About Rs. 30,000 of the gross land revenue has been assigned in revenue-free grants. The total expenditure in 1904 was Rs. 1,36,000, the principal items being tribute, Rs. 12,000; allowances to the ruling family, Rs. 20,000; general administration, Rs. 14,000; and police, Rs. 18,000. The tribute is liable to revision. In twelve years since 1893 the State has expended 3.23 lakhs on public

works under the supervision of the Engineer of the Chhattisgarh States division. The works carried out include, besides the roads mentioned, the construction of a palace, public offices, a hospital, police station, school, and *sarai* at Bhawāni Patnā. The educational institutions comprise 48 schools with 3,876 pupils, including one English and two vernacular middle schools and a girls' school. The total expenditure on education in 1904 was Rs. 7,000. At the Census of 1901, 6,129 persons were returned as able to read and write, the proportion being 1.7 per cent. (3.3 males and 0.1 females). Dispensaries have been established at Bhawāni Patnā, Jūnāgarh, Kāshipur, and Thuāmāl, and a separate dispensary for females at Bhawāni Patnā. About 63,000 persons were treated in these institutions in 1904.

Kālahasti Zamīndāri.—One of the largest *zamīndāri* estates in Madras, situated partly in North Arcot District, partly in Nellore, and partly in Chingleput. Number of villages, 406 in North Arcot, 201 in Nellore, and 206 in Chingleput: area, 638 square miles in North Arcot, 576 in Nellore, and 250 in Chingleput: total population (1901), 223,327. The capital is KĀLAHASTI TOWN, where the *zamīndār* resides. The history of the family, which belongs to the Velama caste, is obscure. The original owner of the estate probably received it from a king of the Vijayanagar dynasty in the fifteenth century, on condition of maintaining order. The estate at one time spread as far as the site of Fort St. George, and the Company obtained the land on which Madras now stands from the proprietor in 1639. The settlement is traditionally said to have been named Chennappapatnam in honour of the *zamīndār's* father. The estate came under British control in 1792, and a formal grant to the family was made in 1801. The *zamīndār* afterwards received the hereditary title of Rājā. The gross income amounts to over 5 lakhs. The *peshkash* (or permanent revenue paid to Government) for the whole of it is 1.7 lakhs, and the demand for land cess amounts to Rs. 35,000. Owing to the estate being heavily encumbered, it was recently taken under the management of the Court of Wards, but it has now been handed back to the proprietor. The estate is in a great measure covered by scrub jungle, especially the portion in North Arcot District. Much firewood is sent to Madras city from these forests; and leopards, bears, and small game are fairly numerous in them. A large number of the jungle tribes of Irulas and Yanadis subsist by gathering honey, roots, and bark for sale in the neighbouring villages. The soil is not very rich, but about 140,000 acres are under cultivation.

Kālahasti Tahsīl.—*Zamīndāri tahsīl* in the Kālahasti *zamīndāri* in the north-east of North Arcot District, Madras, lying between 13° 14' and 13° 55' N. and 79° 27' and 79° 59' E. Area, 638 square miles; population in 1901, 94,132, compared with 81,860 in 1891.

The *tahsīl* contains 324 villages and one town, KĀLAHASTI (population, 11,992), the head-quarters. Demand for *peshkash* and land cess in 1903-4, Rs. 78,000.

Kālahasti Town.—Head-quarters of the *tahsīl* of the same name in North Arcot District, Madras, situated in $13^{\circ} 45' \text{ N.}$ and $79^{\circ} 42' \text{ E.}$, with a station on the South Indian Railway, on the right bank of the Swarnamukhi at the extremity of the Nagari hills. Population (1901), 11,992. It is the residence of the Rājā of Kālahasti, and the head-quarters of the deputy-*tahsildār* and sub-magistrate. A large number of the inhabitants are in the employ of the *zamindār*, whose residence, an imposing-looking building, faces the eastern street of the old town. The approach to the town from the river is through the last gap in the Nagari hills, which are here considered so holy that the quarrying of stone or gravel is forbidden. Kālahasti is a thriving town, carrying on a brisk trade in grain, bangles, and many other articles. A good deal of cotton stuff is woven in the suburbs, and the hand-printed and hand-painted cotton fabrics enjoy a high reputation. Some of the latter gained a bronze medal at the Delhi Darbār Exhibition of 1903. The town is famous for its Siva temple, wherein a festival takes place annually during February and March.

Kalait. Village in the Narwāna *tahsīl*, Karmgarh *nizāmat*, Patiāla State, Punjab, situated in $21^{\circ} 49' \text{ N.}$ and $76^{\circ} 19' \text{ E.}$, 13 miles south-west of Kaithal on the Narwāna-Kaithal branch of the Southern Punjab Railway. Population (1901), 3,490. The place is famous for four ancient temples ascribed to Rājā Sālbāhan, and for a tank, called Kapāl Mani's *tīrath*, which is held sacred by Hindus. The temples, which are adorned with sculptures, are supposed to date from the eleventh century.

Kalale.—Village in the Nanjangūd *tāluk* of Mysore District, Mysore, situated in $12^{\circ} 4' \text{ N.}$ and $76^{\circ} 40' \text{ E.}$, 3 miles south-west of Nanjangūd. Population (1901), 2,500. The place is historically interesting as the ancestral domain of the Dalavāyis of Mysore. It is said to have been founded in 1504 by a connexion of the Vijayanagar family. After the Mysore Rājās acquired Seringapatam in 1610, they formed an alliance with the Kalale family, by which the latter furnished the Dalavāyi, or hereditary minister and general of the State, while Mysore furnished the Kartar ('Curtur' in old English documents) or ruler. Latterly the Dalavāyis rendered the Rājās subservient to their interests, but were in their turn displaced by Haider Ali. The municipality formed in 1899 was converted into a Union in 1904. The receipts and expenditure during the two years ending 1901 averaged Rs. 1,990 and Rs. 650. In 1903-4 they were Rs. 870 and Rs. 2,800.

Kalam.—Crown *tāluk* in the north of Osmānābād District, Hyderabad State. The population in 1901 was 38,030, and the area

303 square miles; but in 1905 the Wāsi *tālūk* was incorporated in it. The total area is now 658 square miles, of which the population in 1901 was 87,701, compared with 120,081 in 1891, the decrease being due to the famine of 1900. The river Mānjra separates the *tālūk* from Bhīr District on the north, and the soil is chiefly *regar*, with some alluvium. It contains 151 villages and yields a land revenue of 3·7 lakhs. The *jāgīr tāluks* of Bhūm and Wālwad lie to the west with 31 and 13 villages, and populations (1901) of 11,416 and 6,997 respectively. Their areas are about 143 and 61 square miles.

Kalam.—Village in the District and *tālūk* of Yeotmāl, Berār, situated in 20° 27' N. and 78° 22' E. Population (1901), 3,595. Kalam was formerly an important fortress; and in 1425 the Bahmani king, Ahmad Shāh Walī, captured it from the 'infidels,' probably Gonds of Chānda or Kherla, into whose hands it had fallen. Kalam and Māhūr were the most important fortresses in the south-eastern corner of Berār at that time. In the *Ain-i-Akbarī* Kalam is mentioned as the headquarters of a *sarkār* or revenue district. It has a remarkable underground temple dedicated to Chintāman.

Kalamnūri.—North-eastern *tālūk* of Parbhani District, Hyderābād State, with an area of 538 square miles. Including *jāgīrs*, the population in 1901 was 58,835, compared with 84,685 in 1891, the decrease being due to the famine of 1900. The *tālūk* had till recently 186 villages, of which 11 were *jāgīr*; and Kalamnūri (population, 4,267) is the head-quarters. The land revenue in 1901 was 1·9 lakhs. In 1905 a few villages were added from Nānder District. The Pengangā flows on the north-eastern border, separating the *tālūk* from the Bāsim District of Berār.

Kalānaur (1).—Town in the District and *tahsīl* of Gurdāspur, Punjab, situated in 32° 0' N. and 75° 10' E., 15 miles west of Gurdāspur town. Population (1901), 5,251. It was the chief place in the neighbourhood from the fourteenth to the sixteenth century, and was twice attacked by Jsrath Khokhar, once after his unsuccessful assault on Lahore in 1422, and again in 1428, when Malik Sikandar marched to relieve the place and defeated Jsrath on the Beās. It was here that Akbar received the news of his father's death. He promptly had himself installed on a *taht* or throne, still to be seen outside the town. Akbar had to retake Kalānaur from Sikandar Shāh Sūr in the following year, and resided here for several months. It was plundered by Banda, the Sikh leader, early in the eighteenth century. The municipality was created in 1867. The income during the ten years ending 1902-3 averaged Rs. 5,100, and the expenditure Rs. 5,000. The income and expenditure in 1903-4 were Rs. 5,400, the receipts being chiefly from octroi. The municipality maintains a vernacular middle school and a dispensary.

Kalānaur (2).—Town in the District and *tahsil* of Rohtak, Punjab, situated in $28^{\circ} 50'$ N. and $76^{\circ} 24'$ E., 12 miles west of Rohtak town on the road to Bhīwāni. Population (1901), 7,640. It was founded by Kaliān Singh and Bhawān Singh, two Ponwār Rājputs, sons-in-law of Anang Pāl, the king of Delhi, and named after the former. Kalānaur remained in the possession of their descendants, who, though dispossessed for a time by the Balochs of Farrukhnagar, were reinstated by the Delhi court. The town is famous for its leather-work, especially saddlery. It has a vernacular middle school.

Kalang.—An offshoot of the Brahmaputra in Assam, which leaves the main stream about 10 miles east of Silghāt, and, after a tortuous course of about 73 miles through Nowgong District, rejoins it on the confines of Kāmrup. In the upper part of its course the Kalang receives the rivers which flow from the western watershed of the Mikir Hills, while the KAPILI, with its affluents the Jamunā and Doiāng, the Barpāni, and the UMĪAM bring to it the drainage of North Cāchār and of the Khāsi and Jaintiā Hills. The DIGRU, another considerable river, joins it near its western mouth. Through the greater portion of its length the banks of the Kalang are lined with villages, the most important of which are Kaliābar, Sāmaguri, Purānigudām, Nowgong, the District head-quarters, and Rahā; but at its western end the country through which it passes lies too low for cultivation, and the banks of the river are covered with dense jungle grass. A sandbank at its eastern end is a serious obstacle to traffic during the dry season, but in the rains a steamer of low draught plies between Nowgong and Silghāt, and carries away the tea collected at various centres. Country boats come up from Gauhāti at all seasons of the year for the transport of mustard, which is grown in large quantities in this portion of the Province. In the dry season the Kalang is fordable at Nowgong and Rahā, but after its junction with the Kapili there is always a considerable depth of water in the channel. Ferries have been established across the river at Kuwarital, Nowgong, Rahā, and Jāgi.

Kalanga.—Hill in Dehra Dūn District, United Provinces, situated in $30^{\circ} 20'$ N. and $78^{\circ} 5'$ E. A fort was hastily thrown up here by the Gurkhas on the outbreak of the war of 1814. It is perched on a low spur of the Himālayas, $3\frac{1}{2}$ miles north-east of Dehra, and was attacked in 1815 by General Gillespie, who fell while leading the storming party; for a time it was desperately defended, but the enemy evacuated it after a second assault, and the British demolished it shortly after. A plain white stone monument commemorates those who fell at the taking of the fort. On the slope of the hill is a village called Nālāpāni, near which is a celebrated spring that forms part of the water-supply of Dehra.

Kalaṣa.—Village in the Mudgere *tāluk* of Kadūr District, Mysore,

situated in $13^{\circ} 14' N.$ and $75^{\circ} 22' E.$, on the Bhadra river, 24 miles north-west of Mudgere town. The village lies in a valley, surrounded by lofty hills, to the south of Mertiparvat, also known as the Kalasa hill. There is a large temple of Kalasesvara, containing thirteenth-century copper grants by Jain queens, and surrounded by fifteenth and sixteenth-century stone inscriptions of the Bhairarasa Wodeyar rulers of Kārkala under Vijayanagar. It was probably a Jain temple originally. Mounds covering ruins of a large town lie on all sides. The original Sāntara kingdom of Pomburchcha extended into the kingdom of Kalasa above the Ghāts and Karkala below the Ghāts. Kalasa is called a 'three thousand' kingdom. In the seventeenth century it was absorbed into the Keladi territory. In a sacred bathing-place on the river, called Ambātīrtha, is a large square boulder, placed horizontally on another, and bearing an inscription that it was brought and placed there with one hand by Madhvāchārya. This was the founder of the Mādhva sect of Brāhmans, who lived from 1238 to 1317. The arecanuts produced in the neighbourhood are reckoned the best in Mysore.

Kālastri.—*Zamindāri tahsīl*, estate, and town in North Arcot District, Madras. See KĀLAHASTI.

Kalāt State.—Native State in Baluchistān, lying between $25^{\circ} 1'$ and $30^{\circ} 8' N.$ and $61^{\circ} 37'$ and $69^{\circ} 22' E.$, with a total area of 71,593 square miles. It occupies the whole of the centre and south-west of the Province, with the exception of the indentation caused by the little State of Las Bela. It is bounded on the west by Persia; on the east by the Bolān Pass, the Marri and Bugti hills, and Sind; on the north by the Chāgai and Quetta-Pishīn Districts; and on the south by Las Bela and the Arabian Sea. With the exception of the plains of Khārān, Kachhi, and Dasht in Makrān, the country is wholly mountainous, the ranges being intersected here and there by long narrow valleys. The principal mountains are the CENTRAL BRĀHUI, KĪRTHAR, PAB, SĪAHĀN, CENTRAL MAKRĀN, and MAKRĀN COAST RANGES, which descend in elevation from about 10,000 to 1,200 feet. The drainage of the country is almost all carried off to the southward by the NĀRI, MŪLA, HAR, PORĀLI, HINGOL, and DASHT rivers. The only large river draining northwards is the RAKHSHĀN. The coast-line stretches for about 160 miles, from near Kalmat to Gwetter Bay, and the chief port is PASNI. Round GWĀDAR the country is in the possession of the Sultān of Maskat.

Physical aspects.

The geological groups in the State include Liassic; Jurassic (lower and upper Cretaceous strata); volcanic rocks of the Deccan trap; Kīrthar (middle eocene); lower Nāri (upper eocene); and Siwālik beds (middle and upper miocene), besides extensive sub-recent and recent deposits. The State also includes a portion of the Indus alluvial plain.

The botany of the north differs entirely from that of the south. In the former the hill slopes occasionally bear juniper, olive, and pistachio; poplars, willows, and fruit trees grow in the valleys; herbaceous and bulbous plants are frequent on the hill-sides; and in the valleys southernwood (*Artemisia*) and many *Astragali* occur. In the latter the vegetation consists of a thorny unpleasant scrub, such plants as *Capparis aphylla*, *Prosopis spicigera*, *Calotropis procera*, *Acanthodium spicatum*, and *Acacia* being common. The dwarf-palm (*Nannorhops Ritchieana*) affords a means of livelihood to many of the inhabitants.

Sind ibex and mountain sheep occur, but are decreasing in numbers. 'Ravine deer' (gazelle) are common. Bears and leopards are seen occasionally. The wild ass is found in the western desert. *Sīsī* and *chikor* are abundant in the higher hills.

The climatic conditions vary greatly. Along the coast conditions are intermediate between those of India and the Persian Gulf. Farther inland great heat is experienced during summer, and the cold season is short. Kachhi is one of the hottest parts of India. Round Kalāt, on the other hand, the seasons are as well marked as in Europe; the temperature in summer is moderate, while in winter severe cold is experienced and snow falls. All the northern parts depend on the winter snow and rain for cultivation; in the south most of the rain falls in the summer; everywhere it is irregular, scanty, and local.

The history of the State has been given in the historical portion of the article on BALUCHISTĀN. After being held successively by Sind, by the Arabs, Ghaznivids, Ghorids, and Mongols, and again returning to Sind in the days of the Sūmras and Sammas, it fell under the Mughal emperors of Delhi. The Ahmadzai power rose in the fifteenth century and reached its zenith in the eighteenth, but it was always subject to the suzerainty of Delhi or Kandahār. After the first Afghān War Kalāt came under the control of the British—a control which was defined and extended by the treaties of 1854 and 1876.

The most interesting archaeological remains in the country are the Kausi and Khusravi *kārez* in Makrān, and the ubiquitous stone dams known as *gabrbands* or 'embankments of the fire-worshippers.' Mounds containing pottery are frequent, and Buddhist remains have been found in Kachhi.

KALĀT TOWN is the capital of the State. Other towns of importance are Bhāg, Gandāva, Māstung, PASNI, and GWĀDAR. Permanent villages

Population. number 1,348, or one to 53 square miles; the majority of the population live in mat huts or in blanket tents. The State is divided into five main divisions: KACHHI, SARAWĀN, JHALAWĀN, MAKRĀN, and KHĀRĀN, the latter being quasi-independent. The population, which numbers (1903) 470,336, consists chiefly of

Brāhuīs and Baloch, but also includes Jats, who are cultivators in Kachhi; Darzādas and Nakībs, the cultivating class of Makrān; Loris, who are artisans; Meds and Koras, who are fishermen and seamen; and servile dependants. The traders consist of Hindus and a few Khojas on the coast. The majority of the people are Sunni Muhammadans, but, in the west, many belong to the sect called Zikri. Except in Makrān and Khārān, the people are organized into tribes, each of which acknowledges the leadership of a chief. Besides these tribesmen, who form the BRĀHUI confederacy with the Khān of Kalāt at its head, a distinct body is found in the Khān's own *ulus* or following, consisting of the cultivators in those portions of the country from which the Khān collects revenue direct. They are chiefly Dehwārs and Jats. Agriculture, flock-owning combined with harvesting, and fishing constitute the means of livelihood of most of the population. Brāhuī, Baluchī, Dehwārī, and Sindī are the languages chiefly spoken.

The soil is sandy in most places; here and there alluvial deposits occur and a bright red clay, which gives place in Makrān to the white clay known as *milk*. Permanent irrigation is possible only in a few favoured tracts; elsewhere, the country depends almost entirely on flood cultivation from embankments. In irrigated tracts the supply of water is obtained from *kūrez*, springs, and rivers. The staple food-grains consist of wheat and *jowār*. In Makrān the date is largely consumed. Rice, barley, melons, millets, tobacco, lucerne, potatoes, and beans are also cultivated. The commonest tree in the orchards is the pomegranate; and apricots, almonds, mulberries, vines, and apples are also grown. Experiments in sericulture are being made at Mastung.

An excellent breed of cattle comes from Nāri in Kachhi. The Sarawān country and Kachhi produce the best horses in Baluchistān. The State possessed 783 branded mares in 1904. Large donkeys are bred near Kalāt town, and those in Makrān are noted for their speed. Sheep and goats are very numerous. The sheep's wool, of which large quantities are exported, is coarse and comes into the market in a deplorable condition of dirt. The goats are generally black. Camels are bred in large numbers in Kachhi, the Pab hills, and Khārān, and animals for transport are available almost everywhere. All households keep fowls. The better classes breed good greyhounds for coursing. The fishing industry on the Makrān coast is important and capable of development. Air-bladders, shark-fins, and salted fish are exported in large quantities.

Very little money circulates in the country, both rents and wages being usually paid in kind, and most of the tribesmen's dealings are carried on by barter. Owing to the inhospitable nature of the country,

the people are very poor. The standard of living has risen slightly of recent years, and the people are now better clothed than formerly. A Brāhui will never beg in his own country. With the Makrānis mendicancy, which is known as *pindag*, is extremely common.

No arrangements for forest 'reservation' exist in the State ; here and there, however, tribal groups preserve special grounds for grass and pasturage. Among minor forest products may be mentioned cumin seed, asafoetida, medicinal drugs, the fruit of the pistachio, bdellium, and gum-arabic. Few minerals have been discovered, and coal alone, which occurs in the Sor range in the Sarawān country, is systematically worked. Traces of coal have been found elsewhere in the Sarawān country. Ferrous sulphate is obtainable in the Jhalawān country, and lead was at one time worked at Sekrān in the same area. Good earth-salt, known as *hāmūn* or *kap*, is obtainable from the swamps, and is also manufactured by lixiviation.

Coarse cotton cloth is woven in Kachhi and articles of floss silk are made in Makrān. All Brāhui women are expert with the needle, and the local embroidery is both fine and artistic. Rugs, nose-bags, &c., woven by nomads in the *darī* stitch, are in general use. The art of making pile-carpets is known here and there. Durable overcoats (*shūī*) are made by the women from dark sheep's wool. Leather is embroidered in Kachhi, Kalāt, and Mastung. Matting, bags, ropes, and other articles are manufactured from the dwarf-palm.

Trade and communications.

Commerce is hampered by the levy of transit dues and octroi, both by the State and by tribal chiefs, and by the expense of camel-transport. The chief centres of trade are Kalāt, Mastung, Gandāva, Bhāg, Turbat, Gwādar, Pasni, and Nāl. The exports consist of wool, *ghī*, raw cotton, dates, salted fish, matting, medicinal drugs, and cattle, in return for which grain, piece-goods, metals, and silk are imported. From the north the traffic goes to Quetta ; from the centre to Kachhi and Sind ; and from the south and west by sea and land to Karāchi.

The North-Western Railway traverses the east and north-east of the State. The only cart-road is that from Quetta to Kalāt town. All other communications consist of tracks for pack-animals, the most important of which are those connecting Kalāt with Panjgūr, Kalāt with Bela via Wad, and Kachhi with Makrān via the Mūla Pass. A track is now in course of construction from Pasni on the coast to Panjgūr. A postal service to Kalāt is maintained by the British Government, and letters are carried thence once a week to Khuzdār. The British India Company's mail steamers touch at Pasni and Gwādar on alternate weeks, and mails are carried from Pasni to Turbat, the head-quarters of Makrān. The Indo-European Telegraph wire traverses the coast, with

offices at Pasni and Gwādar ; a telegraph line runs from Quetta to Kalāt, and a line has been sanctioned from Karāchi to Panjgūr.

The State experiences constant scarcity and occasional famine. A drought lasting for ten years between 1830 and 1840 is mentioned by Masson. The population is, however, sparse and exceedingly hardy, and they have ready access to Sind, where good wages are obtainable. In the Census of 1901 as many as 47,345 Brāhuis were enumerated there. Advances amounting to about Rs. 29,000 were made by the State in 1900, when the scarcity which had begun in 1897 reached its culminating point. Such advances are recovered from the cultivator's grain heap at the ensuing harvests.

The control exercised by the British Government over the Brāhui confederacy, and the administrative arrangements in areas subject to the direct authority of the Khān of Kalāt, are described in the article on BALUCHISTĀN. Except Khārān and Makrān, each main division of the State comprises both tribal areas and areas subject solely to the Khān. Collateral authority is, therefore, exercised by the Khān in his *nābats* and by tribal chiefs in their country. The intervention of the Political Agent is confined, as far as possible, to deciding inter-tribal cases or cases between the tribesmen and the Khān's subjects in which a right of arbitration rests with the British Government. In Makrān the Khān's *nāzim* exercises authority everywhere ; in Khārān the chief is now subject to no interference from the Khān, but looks to the Political Agent in Kalāt. The Quetta, Nushki, and Nasirābād *tahsils* have been leased in perpetuity by the State to the British Government, and the right to levy transit dues in the Bolān Pass has been commuted for an annual subsidy of Rs. 30,000. The head-quarters of the Political Agent were fixed at Mastung in 1904.

The revenue of the State is derived from three principal sources : subsidies and rents paid by the British Government, interest on investments, and land revenue. The subsidies include Rs. 1,00,000 paid under the treaty of 1876 and Rs. 30,000 for the Bolān Pass, while the quit-rents for the leased areas mentioned above amount to Rs. 1,51,500. Since 1893 a surplus of 41.5 lakhs has been invested in Government securities, yielding in interest 1.5 lakhs per annum. From this source are defrayed the cost of maintenance of the former Khān, Mīr Khud-ādād, the subsidies paid to the Jhalawān chiefs, the pay of Brāhui *thānas*, and the expenses of the administration of Makrān. The total income of the State may be estimated at between 7½ and 8¼ lakhs of rupees, the variations being due to fluctuations in the land revenue. The expenditure amounts to about 3½ or 4 lakhs. A sum of Rs. 53,000 is expended annually in the State by the British Government, in the

shape of telegraph subsidies, payments to chiefs for controlling their tribesmen, and the maintenance of levies. To this will now be added the charges, amounting to about 1·2 lakhs per annum, for the Makrān Levy Corps.

Land revenue is collected in kind, the rates varying from one-third to one-eighth of the produce. Cesses are also taken, the amount of which differs in almost every village, but which raise the share taken by the State to nearly one-half. Here and there are to be found cash assessments (*zar-i-kalang* or *zar-i-shāh*). The cultivators also perform certain services for the Khān, such as the escort of his horses and the repairs to the walls of his forts. Transit dues (*muhāri*) are levied on caravans passing through the *niābats*, and octroi (*sung*) on their entering and leaving trading centres. Contracts are given for the sale of liquor, meat, &c. The total land revenue varies with the agricultural conditions of the year. In 1903-4, on the introduction of a new system of administration, it rose to 4·5 lakhs. Large areas are held by tribesmen and tribal chiefs, in which the Khān is entitled to no revenue. In others, half the revenue has been alienated by the Khān (*adh-ambāri*). Many of these *jāgīrs* were originally held on the condition of feudal service. In Makrān the Gichkis, Nausherwānis, Bizanjaus, and Mīrwāris are the principal holders, while in Kachhi the *jāgīrs* are held by Brāhuis and Baloch. In such areas the tribal chiefs claim complete independence in all revenue, civil, and criminal matters. In *adh-ambāri* areas the Khān retains jurisdiction.

The army is an irregular force, without organization or discipline, consisting of 300 infantry, 300 cavalry, and 90 artillery with 29 old-fashioned guns, of which none are serviceable. The infantry is divided into two regiments, and the cavalry into three. The total cost amounts to about Rs. 82,000 per annum. Most of the troops are at Kalāt; detachments are stationed at Mastung and Khuzdār, and in Kachhi. Sepoys are paid Rs. 6 a month; non-commissioned officers, Rs. 7 to Rs. 12; while *risāldārs* and commandants receive from Rs. 20 to Rs. 50. The cavalry soldiers are mounted on horses found by the State. A force of 160 men is also maintained in Makrān, at an annual cost of about Rs. 32,000. Between 1894 and 1898 a body of 205 infantry and 65 camelmen under a British officer, known as the Kalāt State Troops, was maintained, but has been disbanded.

At the most important places in the Khān's *niābats* levies, known as *amla*, are stationed. These men are used for all kinds of duties, both revenue and criminal. They number 222, of whom 118 are mounted on their own horses and 64 are supplied with horses, when required, by the Khān. The remainder are unmounted. They are paid in kind, and get Rs. 18 per annum in cash. The total cash payments made to them amount to about Rs. 4,000. For dealing with cases in which

Brāhuis are concerned, *thānas*, manned by Brāhui tribesmen, are located in different parts of the country. They number eleven, with 100 men. In tribal areas and *jāgīrs* the peace is maintained by the chiefs, subsidies amounting to about Rs. 50,000 being paid by the Khān for this purpose in addition to the amounts paid by the British Government. A force of ten police is attached to the Political Adviser to the Khān for escort duty. One jail is maintained, with accommodation for 100 prisoners, and there are lock-ups at the Brāhui *thānas*. Offenders are often kept in the stocks, and are fed by their relations.

Education has hitherto been entirely neglected, but a large school is about to be opened at Mastung. A few boys are taught in mosque schools, and Hindu children receive education from their parents. Two dispensaries are maintained, one by the British Government and the other by the State. They relieved 8,919 patients in 1903 and cost Rs. 5,300. Inoculation is practised everywhere, principally by the Saiyids and Shaikhs, but the people have no objection to vaccination. The whole country has been surveyed on the $\frac{1}{2}$ -inch scale up to 66° E. ; the results of a reconnaissance survey westward have been published on the $\frac{3}{4}$ -inch scale.

[*Baluchistān Blue Books*, Nos. 1, 2, and 3 (1887); H. Pottinger, *Travels in Beloochistan and Sind* (1816); C. Masson, *Narrative of a Journey to Kalāt* (1843); *Journeys in Baluchistān, Afghānistān, and the Punjab* (1842); G. P. Tate, *Kalāt* (Calcutta, 1896).]

Kalāt Town.—Capital of the Kalāt State in Baluchistān, situated in 29° 2' N. and 66° 35' E., 88½ miles from Quetta on the south of the Sarawān division. It is known to the natives as Kalāt-i-Baloch and Kalāt-i-Sewa; the former to distinguish it from Kalāt-i-Ghilzai in Afghānistān, and the latter after its legendary founder. The population (1901) does not exceed 2,000 persons. The inhabitants are chiefly the Khān's troops, numbering 491, and his retainers, with a few Hindu traders. The town occupies a spur of the Shāh-i-Mardān hill on the west of the Kalāt valley. A wall surrounds it, with bastions at intervals. Its three approaches on the north, south, and east are known respectively as the Mastung, Gilkand, and Dildār gates. Three suburbs lie close by. Commanding the town is the *miri* or citadel, an imposing structure in which the Khān resides. Kalāt fell into the hands of the Mirwāris about the fifteenth century, since which time the place has remained the capital of the Ahmadzai Khāns. In 1758 it withstood three assaults by Ahmad Shāh Durrani, and in 1839 was taken by the British under General Willshire. A year later it surrendered to the Sarawān insurgents. Below the citadel lies a Hindu temple of Kālī, probably of pre-Muhammadan date. The marble image of the goddess, holding the emblem of plenty, stands in front of two lights which are perpetually burning. The

trade of the town is chiefly retail business. Taxes on trade are collected by a system of contracts. Police functions are carried out by an official known as *mir shah*, assisted by watchmen (*kotwāls*).

Kalataik.—Ancient site in Thaton District, Lower Burma. See **TAIKKALA**.

Kalāt-i-Ghilzai.—Fort in the Kandahār province of Afghānistān, situated in $30^{\circ} 7' N.$ and $66^{\circ} 55' E.$, on the road from Kandahār to Ghazni; 5,543 feet above the sea. It stands on the right bank of the Tarnak river, 87 miles from Kandahār and 229 from Kābul. The fort was occupied in 1842 by a sepoy garrison under Captain Craigie, which gallantly repulsed a determined Afghān attack in greatly superior numbers. In memory of this feat of arms, the 12th Pioneers still bear the name of 'The Kelat-i-Ghilzai Regiment,' and carry a special colour with the motto 'Invicta.' The fort was again held by a detachment of British troops in 1879–80. In the winter months the cold is very great; during spring and summer the climate is pleasant. The fort gives its name to one of the districts of the Kandahār province.

Kalburga.—Town in Gulbarga District, Hyderābād State. See **GULBARGA**.

Kale Subdivision.—South-western subdivision of the Upper Chindwin District, Upper Burma, containing the MASEIN, KALEWA, and KALE townships.

Kale.—South-western township of the Upper Chindwin District, Upper Burma, lying along the eastern slopes of the Chin Hills, between $22^{\circ} 40'$ and $23^{\circ} 41' N.$ and $93^{\circ} 58'$ and $94^{\circ} 16' E.$, with an area of 816 square miles. The population in 1901 was 10,691, distributed in 94 villages, Kalemyo (population, 881), on the Myittha stream, about 20 miles from its mouth, being the head-quarters. The township, which possesses a pestilential climate, consists of the valleys of the Myittha and its tributary the Neyinzaya *chaung*, which flows past the village of Yazagyo in a southerly direction to meet it. The area cultivated in 1903–4 was 34 square miles, and the land revenue and *thathameda* amounted to Rs. 34,000. The township was formed after the Census of 1901.

Kāle.—Village in the Karād *taluka* of Sātāra District, Bombay, situated in $17^{\circ} 14' N.$ and $74^{\circ} 13' E.$, 31 miles south-by-east of Sātāra town. Population (1901), 5,077. Near it lie the Agashiv caves, the oldest Buddhist caves in the District.

Kalewa Township.—Southern township of the Upper Chindwin District, Upper Burma, lying on either side of the Chindwin river, between $23^{\circ} 1'$ and $23^{\circ} 17' N.$ and $94^{\circ} 14'$ and $94^{\circ} 30' E.$, with an area of 184 square miles, nearly the whole being a mass of low hills. The population in 1901 was 3,535, distributed in 36 villages. The head-quarters are at Kalewa (population, 1,036), situated at the junction

of the Myittha and Chindwin rivers, about 40 miles below Kindat. The area cultivated in 1903-4 was 11 square miles, and the land revenue and *thathameda* amounted to Rs. 10,000. The township was formed after the Census of 1901.

Kalghatgi.—Western *tāluka* of Dhārwar District, Bombay, lying between $15^{\circ} 2'$ and $15^{\circ} 22'$ N. and $74^{\circ} 56'$ and $75^{\circ} 8'$ E., with an area of 275 square miles. There are 99 villages, but no town. The head-quarters are at Kalghatgi. The population in 1901 was 53,657, compared with 55,258 in 1891. The density, 195 persons per square mile, is much below the District average. The demand for land revenue in 1903-4 was 1.3 lakhs, and for cesses Rs. 9,000. Most of the country is broken by wooded hills. The east and south are open and rolling, with bushy uplands. The north and west are wilder. The supply of water is on the whole plentiful. The rainfall in the west is heavier than in the rest of the *tāluka*—the average at Kalghatgi village being 36 inches a year.

Kālī.—River of Nepāl and the United Provinces, better known as the SĀRDĀ.

Kālākherī.—Head-quarters of the Nizāmat-i-Janūb or southern district of Bhopāl State, Central India, situated in $23^{\circ} 2'$ N. and $77^{\circ} 40'$ E., 6 miles by metalled road from Hiranīa station on the Midland section of the Great Indian Peninsula Railway. Population (1901), 1,333. It contains a school and British and State post offices.

Kālīāna (or Chal-Kalyāna).—Town in the Dādri *tahsil* of Jind State, Punjab, situated in $28^{\circ} 33'$ N. and $76^{\circ} 16'$ E., 5 miles east of Dādri town. Population (1901), 2,714. It was the capital of Kalyān of the Chal tribe, a Rājā who in 1325 rebelled against Alaf Khān, son of Ghiyās-ud-dīn Tughlak, king of Delhi, and was defeated and slain by Saiyid Hidāyatullah Khān, who also fell and whose tomb still exists.

Kaliandroog.—*Tāluk* and town in Anantapur District, Madras. See KALYANDRUG.

Kālī Baorī.—*Bhūmiāt* in the BHOPĀWAR AGENCY, Central India.

Kālīganj.—Village in the Sātkhira subdivision of Khulnā District, Bengal, situated in $22^{\circ} 27'$ N. and $89^{\circ} 2'$ E., on the Kānksīālī river. Population (1901), 47. Kālīganj lies on the boat-route between Calcutta and the eastern Districts, and has a large bazar and considerable local trade. It is also noted for its manufacture of earthenware, horn, and cutlery.

Kālīmpong (or Dālingkot).—A hilly tract in Darjeeling District, Bengal, lying between $26^{\circ} 51'$ and $27^{\circ} 12'$ N. and $88^{\circ} 28'$ and $88^{\circ} 53'$ E., with an area of 412 square miles. It is situated east of the Tista, west of the Ni-chu and Di-chu (Jaldhākā), and south of the State of Sikkim.

and was acquired from Bhutān after the campaign of 1864-5. Of the total area, 213 square miles are occupied by 'reserved' forests and 10 square miles by four tea gardens, while 179 square miles are reserved for native cultivation; five-sixths of the inhabitants are settled on the *khās mahāls* or state lands. The country is cut up by ridges of varying height and steepness, separated by narrow valleys, the principal of which run back far into the mountains. These ridges debouch into the plains at elevations ranging from 300 feet to 1,000 feet above sea-level, rising in the interior to 10,500 feet at Rishi La. Over a large portion of the tract the 'reserved' forests cover the tops of the ridges and the bottoms of the valleys, while the cultivated area occupies the intervening space. The land above 5,000 feet is mostly, and that above 6,000 feet almost entirely, under 'reserved' forest, which also covers most of the area below 2,000 feet. The chief crop grown is maize, which occupies 38,000 acres, or more than three-quarters of the net cropped area. A new settlement of the land revenue was completed in 1903; the demand is Rs. 10,000 per annum, and Rs. 1,300 is realized from cesses. A poll tax was originally levied, which was gradually replaced by block rates, and these have in their turn given way to a differential classification and assessment of the lands within each block.

The land has been classified for revenue purposes as cardamom, held rent free for the first three years, during which there is practically no out-turn, after which it is assessed at Rs. 10 per acre; terraced rice lands, paying from 8 annas to Rs. 1-4 per acre; unterraced cultivation, including fallows of less than three years' standing, paying 6 annas to 15 annas per acre; and fallows of three years' standing and over, paying from 2 to 3 annas per acre. Some lands in each of the last three classes are assessed at a slightly lower rate for the first few years of the settlement. The estate has been divided into 48 blocks, excluding Kālimpong bazar, each under a headman or *mandal*, who is responsible for the collection of rents, the repair of roads, and certain other duties, in return for which he receives a percentage on the collections and certain other privileges. The total rental of the *khās mahāls* for 1903-4 was Rs. 31,000, and they are exempt from the payment of cesses. The chief village in the estate is KĀLIMPONG; and there are large bazars at Pedong on the Tibetan trade route, and at Sombāri at the end of the Chel valley, where the produce of the hill cultivators is sold to the cultivators of the Duārs. The forests and the colliery at Dāling have been referred to in the article on DARJEELING DISTRICT. A new tract has been opened for cinchona cultivation at Munsang. Oranges are grown and exported to the Duārs and the *tarai*.

[C. A. Bell, *Settlement Report* (Calcutta, 1905).]

Kālimpong Village.—Village in the head-quarters subdivision of

Darjeeling District, Bengal, situated in $27^{\circ} 4' \text{ N.}$ and $88^{\circ} 28' \text{ E.}$, 3,933 feet above sea-level. Population (1901), 1,069. The village, which has given its name to the tract of hilly country formerly known as Dālingkot, is the established market for Tibetan wool and other exports, and contains a large bazar. The wool, which is brought in via the Jelep La from Tibet, is dispatched by carts along the Tista valley road to Siligurī on the Eastern Bengal State Railway. Since 1891 a fair has been held annually in November at Kālimpong, at which agricultural produce and stock are exhibited and prizes are given both in cash and in the form of English poultry and selected seed; this is the most successful agricultural show in Bengal, and is supported by subscriptions supplemented by a Government grant. More than 100 Tibetan mules are annually purchased here by Government for transport purposes at an average price of Rs. 150. A branch of the Church of Scotland Mission, established at Kālimpong, possesses a church, an Anglo-Hindī middle school with 4 masters and 55 pupils, and a hospital with 28 beds in connexion with the Government dispensary. The St. Andrew's Colonial Homes were instituted in 1900, under the auspices of the Church of Scotland, for the education of poor European and Eurasian children. The object of these homes is to give the children, in a healthy District and favourable environment, such a course of training as will fit them for emigration to the Colonies, or make them more robust for work in India. The scheme is managed by an independent committee, and the system adopted is that of cottage homes, each cottage holding 25 to 30 children. Originally 100 acres of land were granted by Government and an agricultural expert was appointed to superintend the outdoor work. The board of management have since obtained permission to acquire a tract of about 330 acres more and to hold it in the position of a ryot; of this, about 200 acres have already been acquired. The first cottage was opened in 1901, and three other cottages and a central school have since been added.

Kālī Nadī, East (properly Kālindī, corrupted into Kālī Nadi or 'black river' by Persian writers).—River of the United Provinces, flowing through the Districts of Muzaffarnagar, Meerut, Bulandshahr, Aligarh, Etah, and Farrukhābād. It rises under the name of Nāgan in Muzaffarnagar ($29^{\circ} 19' \text{ N.}$, $77^{\circ} 48' \text{ E.}$), but in this District as well as in Meerut its bed is ill-defined and often dry. In Bulandshahr it becomes a perennial stream, running through a valley marked by high banks, and takes the name of Kālī Nadī. Its course then changes from south to south-east till it joins the Ganges not far above Kanauij, 310 miles from its source. The valley of the river in Bulandshahr, and in Etah, Mainpurī, and Farrukhābād, has suffered from the inability of the channel to carry off excessive rainfall, the effects in Bulandshahr

being augmented by the use of the river as a canal escape. Of late years, however, the Irrigation department has carried out a number of works to improve the flow, and deterioration has stopped. In 1885 a flood swept away the Nadrai aqueduct in Etah, which carries the Lower Ganges Canal over the river, and a series of wet seasons caused the land in the valley to deteriorate so much that large reductions of assessment were made. This tract has now recovered to a great extent.

Kālī Nadī, West.—A tributary of the HINDAN, about 70 miles long, rising in the Sahāranpur District of the United Provinces (30° N., $77^{\circ} 45'$ E.), 16 miles from the Siwāliks, and flowing south-west and south through Sahāranpur and Muzaffarnagar, between the Hindan and the Ganges Canal. Its junction with the Hindan is at the point where the latter river enters Meerut.

Kalinga.—One of the ancient kingdoms on the east coast of India. Its limits have been variously fixed, but it appears to have included the country lying between the Eastern Ghāts and the sea from the Godāvari river as far north as Orissa. Its people and its reigning house are alluded to in the oldest extant chronicles of India and Ceylon, and were also known to the classical writers of Greece and Rome and to the inhabitants of the Far East. They appear to have been adventurous traders by sea to different countries. The earliest Buddhist legends speak of the Kalinga monarchs as being even then the rulers of a civilized country, but little definite is known of them. A number of kings belonging to the Eastern Gangas of Kalinga are named in copperplate grants, which are dated in an era whose starting-point has yet to be settled. The earliest of these kings is believed to belong to the seventh century. Later records of the same family state that the Gangas of Kalinga were the cousins of the Western Gangas of Mysore. At the beginning of the eleventh century the Cholas overran Kalinga, which was then in the possession of the Eastern Chālukyas, and set up a pillar of victory on the Mahendragiri hill. The Gangas appear to have held Kalinga until a comparatively late period, though defeated by the Gajapatis in the fifteenth century. Inscriptions recently deciphered seem to show that their capital, for which very various sites have been at different times assigned, was at MUKHALINGAM in Ganjām District.

Kalingāpatam.— Historic village in Ganjām District, Madras. See CALINGAPATAM.

Kālinjar.—Town and hill-fort in the Girwān *tahsil* of Bāndā District, United Provinces, situated in $25^{\circ} 1'$ N. and $80^{\circ} 29'$ E., 35 miles south of Bāndā town. Population (1901), 3,015. The fort occupies a hill which rises abruptly, and is separated from the nearest eminence by a valley about seven miles across. Elevation, 1,203 feet above the sea. The crown of the hill is a plateau. Vast polyhedral masses of

syenite form the base and afford a comparatively accessible slope, but the horizontal strata of sandstone which cap the whole present so bold an escarpment as to be practically impossible of ascent.

Kālinjar is one of the very ancient forts of Bundelkhand, and separate names for it are recorded in each of the three prehistoric periods of Hindu chronology. It is said to have been called Ratnakūta in the *Satya-yuga*, Mahāgiri ('the great hill') in the *Tretā*, and Pingālu (the 'brown-yellow' hill) in the *Dwāpara-yuga*. Other accounts transpose or vary these names. But its present appellation, Kālinjar, is itself of great antiquity. It occurs, as will be mentioned hereafter, in the *Mahābhārata*; it is conjectured to appear in Ptolemy under the name of Tamasis; and it is mentioned in the *Siva Purāna* as one of the nine *utkals*, from which will burst forth the waters that are finally to destroy the world. The modern name is sometimes rendered Kālanjar, from the local worship of Siva under his title of Kālanjara, or 'He who causes time to grow old.' It was a very ancient seat of Saivite rites, and according to local traditions was strongly fortified by Chandra Brim or Varmma, the legendary founder of the Chandel dynasty.

As in many other cases, Kālinjar was a high place sanctified by superstition, and fortified partly by nature and partly by art. The *Mahābhārata* mentions it as already a famous city, and states that whoever bathes in the Lake of the Gods, the local place for pilgrimage, is as meritorious as he who bestows in charity one thousand cows. The hill must have been covered with Hindu temples before the erection of the fort, for the dates of the inscriptions on the sacred sites are earlier than those on the gates of the fortress; and the ramparts consist largely of ornamental pillars, cornices, and other fragments of carved work, which evidently belonged to earlier edifices. Firishhta speaks of it as having been founded by Kedār Nāth, a reputed contemporary of the Prophet, in the seventh century A.D. The Musalmān historians make mention of the king of Kālinjar as an ally of Jaipāl, Rājā of Lahore, in his unsuccessful invasion of Ghazni, A.D. 978. A Rājā of Kālinjar was also present at the battle of Peshāwar, fought by Anand Pāl in 1008, when endeavouring to check the victorious advance of Mahmūd of Ghazni in his fourth expedition. In 1021 Ganda or Nanda, the Chandel Rājā of Kālinjar, defeated the king of Kanauj; and in 1023 Mahmūd of Ghazni besieged the fort, but came to terms with the Rājā. The Chandel clan of Rājputs removed the seat of their government from MAHOBA to Kālinjar after their defeat by Prithwī Rāj, the Chauhān ruler of Delhi, about 1182. In 1203 Kutb-ud-dīn, the viceroy of Muhammad Ghorī, took Kālinjar, and 'converted the temples into mosques and abodes of goodness,' while 'the very name of idolatry was annihilated.' But the Musalmāns do not seem to have long retained possession of their new conquest;

for in 1234, and again in 1251, we hear of fresh Muhammadan attacks on Kālinjar, which fell into the hands of Malik Nusrat-ud-dīn with a great booty. In 1247 Sultān Nāsir-ud-dīn Mahmūd brought the surrounding country under his sway; but even after this date, Chandel inscriptions erected in the fort show that it remained in the hands of its ancient masters almost up to the close of the thirteenth century.

Kālinjar next reappears in history in 1530, when the Mughal prince, Humāyūn, son of Bābar, laid siege to the fort, which he continued intermittently to attack during ten years. In 1545 the Afghān, Sher Shāh, marched against the stronghold; during the siege a live shell rebounded from the walls into the battery where the Sultān stood, and set fire to a quantity of gunpowder. Sher Shāh was brought out horribly burnt, and died the following day. Before his death, however, he ordered an assault, which was executed with instant success, and his son, Jalāl Khān, was crowned in the captured citadel and assumed the name of Islām Shāh. In 1569 Majnūn Khān attacked the fort, which was finally surrendered to him for Akbar, who constituted it the head-quarters of a *sarkār*. Under Akbar, Kālinjar formed a *jāgīr* of the imperial favourite, Rājā Birbal. Later it fell into the hands of the Bundelās (*see* BĀNDĀ DISTRICT); and on the death of their national hero, Chhatarsāl, it passed into the possession of Hardeo Sāh of Pannā. His descendants continued to hold it for several generations, when they gave way to the family of Kaim Jī, one of their own dependants.

During the period of Marāthā supremacy, Alī Bahādur laid siege to the fort for two years, but without success. After the British occupation Daryau Singh, the representative of Kaim Jī, was confirmed in possession of the fort and territory. But on his proving contumacious in 1812, a force under Colonel Martindell attacked Kālinjar; and although he failed to take the place by storm, Daryau Singh surrendered eight days later, receiving an equal portion of territory in the plains. During the Mutiny, a small British garrison retained possession of the fort throughout the whole rebellion, aided by the Rājā of Pannā. In 1866 the fortifications were dismantled.

The summit of the rock is between 4 and 5 miles in circuit, and is fortified by a rampart rising from the very edge. Access is obtained by a sloping pathway and flight of steps passing through seven gateways, several of which bear inscriptions. Numerous rock-cut tanks and a few remains of temples are to be seen on the plateau, and religious carvings and inscriptions are scattered about, some of which have yielded valuable historical results. One temple, dedicated to Nīlkanth, is still in good repair. There are also many caves, some of which contain inscriptions.

The town is locally known as Tarahtī, and is situated at the foot of the hill. It is now of small importance; but the ruins of fine residences and many old remains prove it to have been once rich and important. Tarahtī contains a dispensary, and was till recently administered under Act XX of 1856, but its importance is decreasing. There is a village school.

[*Journal, Asiatic Society of Bengal*, vol. xvii, pp. 171 and 313; Cunningham, *Archaeological Survey Reports*, vol. xxi, p. 20.]

Kālinjara.—Village in the State of Bānswāra, Rājputāna, situated in 23° 21' N. and 74° 19' E., on the right bank of the Hāran stream, a tributary of the Anās, 17 miles south-west of the capital. It was formerly a place of considerable trade carried on by Jain merchants, who were driven away by Marāthā freebooters. It is now the headquarters of the southern of the two districts into which the State has been recently divided, and possesses a small Hindī school attended by about 20 boys. The place is remarkable as containing the ruins of a fine Jain temple, described by Heber as being built on a very complicated and extensive plan. It is covered with numerous domes and pyramids and divided into a great number of apartments, roofed with stone, crowded with images, and profusely embellished with rich and elaborate carvings.

[Bishop Heber, *Narrative of a Journey through the Upper Provinces of India*, vol. ii (1828).]

Kālī Sind.—Tributary of the CHAMBAL, draining part of Central India and Rājputāna. It rises in the Vindhya in 22° 36' N. and 76° 25' E., at the village of Barjhirī, and flows for about 180 miles through the Gwalior, Dewās, Narsingharh, and Indore States in Central India, after which it traverses Kotah and Jhālāwār in Rājputāna, piercing the Mukandwāra hills near Gāgraun, and falls into the Chambal, 225 miles from its source, near the village of Pīpara in Kotah State (25° 32' N. and 76° 19' E.). Its principal tributaries are the Lakundar in Central India, and the Pārwan, Ujar, and Ahu in Rājputāna. Though a perennial stream, the volume of water is small except in the rains, and several roads cross the river by causeways. The Ujjain-Bhopāl Railway, however, passes over a bridge near the Kālī Sind station. Water for irrigation is raised from its bed in the upper part of its course, but lower down the banks become too steep. The river is frequently referred to in Sanskrit literature, and is mentioned by Abul Fazl as one of the principal rivers of Mālwa. Sārangpur and Gāgraun are the principal places on its banks. It is probable that Kālī ('black') Sind derives its name from the prevalence of black basalt in its bed.

Kālka.—Town attached for administrative purposes to the Kharar *taluk* of Ambāla District, Punjab, situated in 30° 50' N. and 76° 57' E.,

at the foot of the outlying range of the Himālayas at an elevation of 2,400 feet, and entirely surrounded by Patīāla territory. It is the junction of the Delhi-Umballa-Kālka and Kālka-Simla Railways. Population (1901), 7,045. Kālka was acquired from Patīāla in 1843 as a *dépôt* for Simla; it is also an important market for hill produce, such as ginger and turmeric. There is a considerable manufacture of millstones, and a railway workshop is situated here, which employed 200 hands in 1904. It is administered as a 'notified area.'

Kallakurchi.—Western *tāluk* of South Arcot District, Madras, lying between $11^{\circ} 34'$ and $12^{\circ} 4'$ N. and $78^{\circ} 38'$ and $79^{\circ} 13'$ E., with an area of 873 square miles. The KALRĀVANS, one of the only two hill-ranges in the District, skirt its western border, and south of them the Atūr pass leads into Salem District. The population in 1901 was 269,377, having risen from 239,405 in 1891. There are no towns; but it contains 367 villages, of which Kallakurchi, the head-quarters, is situated on the trunk road from Cuddalore to Salem. It is the second largest *tāluk* in the District, and the second most sparsely peopled. The demand for land revenue and cesses in 1903-4 amounted to Rs. 4,92,000. In the hills in the west rise several small streams, which are utilized for irrigation by means of rough stone dams. The hill villages, which number 96, are divided into three *pālaiyams* or estates. The *poligārs* or chiefs obtain their revenue chiefly by leasing out the forests and by a poll-tax on their tenants, who are all Malaiyālis by caste. There is no irrigated cultivation on the hills; the principal 'dry crops' grown are *rāgi*, *cambu*, *tinai* (*Setaria italica*, a poor kind of millet), and *varagu*. Bamboos and timber of various kinds are taken down to the plains, and sold for house-building and other purposes.

Kalliānpur.—Village in the Udipi *tāluk* of South Kanara District, Madras, situated in $13^{\circ} 24'$ N. and $74^{\circ} 44'$ E. It is conjectured to have been the Kalliana mentioned by Cosmas Indicopleustes as the seat of a bishop in the sixth century. It is also the reputed birthplace of Madhvāchārya, the Vaishnavite reformer, who was born about A.D. 1199. The Portuguese established a factory here in 1678.

Kallidaikurichi.—Town in the Ambāsamudram *tāluk* of Tinnevely District, Madras, situated in $8^{\circ} 41'$ N. and $77^{\circ} 27'$ E., on the Tāmbraparni river. It is a Union, with a population (1901) of 14,913. It contains a large number of Brāhmans, several of whom are engaged in a flourishing cloth trade with Travancore, while others are also bankers. The fields around the town are well watered and very valuable.

Kallikota and Atagada.—Two permanently settled estates in Ganjām District, Madras, lying between $19^{\circ} 28'$ and $19^{\circ} 52'$ N. and $84^{\circ} 43'$ and $85^{\circ} 12'$ E., on the northern boundary of the Presidency.

While the former is impartible, the latter is partible, and was acquired in 1854 by the *zamindār* of Kallikota by purchase at a sale for arrears of revenue. The joint area of the two is 507 square miles and their population (1901) 169,693. The *peshkash* and cesses payable by them in 1903-4 amounted to Rs. 1,11,000. The chief village, Kallikota, is beautifully situated in a basin surrounded by hills.

The Kallikota family was founded by Rāmabhūya, who was made a *zamindār* by the Gajapati king of Orissa, Purushottama. At a later period he obtained the title of Mardarājā Deo for his services in keeping the Marāthās out of the country. In 1769 the estate was in a disturbed condition and was occupied by British troops, and from 1771 to 1775 troops were again employed in maintaining order.

The soil is fertile and well irrigated, and yields good crops. The prevailing tenure is *mustājiri*, under which the villages are rented out to middlemen who collect the assessment. The rent payable by the tenant to the landlord is generally half the gross produce.

The present Rājā succeeded in 1887 as a minor, and the estates were managed for the next five years by the Court of Wards. During this period Rs. 93,000 was spent on repairs to irrigation works, Rs. 1,34,000 of debt was cleared off, and the property was handed over to its owner in 1893 in a flourishing condition, with an income which had been increased from Rs. 2,41,000 to Rs. 3,17,000, and with a cash balance of Rs. 2,11,000. Within the next ten years the Rājā had dissipated this balance, incurred further debts, and mortgaged the two estates to his creditors.

Kallūr Tāluka (formerly called Madhra).—Southern *tāluk* of Warangal District, Hyderābād State, north of the Kistna District of Madras, with an area of 966 square miles. The population in 1901, including *jāgīrs*, was 103,829, compared with 92,738 in 1891. The *tāluk* contains 184 villages, of which 25 are *jāgīrs*, and Kallūr (population, 2,741) is the head-quarters. The land revenue in 1901 was 2.5 lakhs. The Nizām's Guaranteed State Railway passes through the *tāluk* from north-west to south-east. Rice is largely cultivated near tanks. The diamond mines of Partyal are situated in this *tāluk*.

Kallūr Town.—Town in the Raichūr *tāluk* of Raichūr District, Hyderābād State, situated in 16° 9' N. and 77° 13' E., 10 miles west of Raichūr town. It has three temples built of stone, all in good preservation, and two mosques. Population (1901), 6,456.

Kalmeshwar.—Town in the District and *tahsīl* of Nāgpur, Central Provinces, situated in 21° 14' N. and 78° 56' E., 13 miles west of Nāgpur city by road. Kalmeshwar is supposed to have been founded by nomad Ahīrs or herdsmen, and the name is derived from that of their god Kalma. Population (1901), 5,340. The town stands on black soil, lying low, with bad natural drainage. On a small eminence in its

centre is an old fortress, said to have been built by a Hindu family from Delhi in the time of Bakht Buland. Kalmeshwar was constituted a municipality in 1867. The municipal income during the decade ending 1901 averaged Rs. 4,400. In 1903-4 the income was Rs. 5,000, mainly derived from a house tax and market dues. A weekly cattle market is held, and there is some trade in grain and oilseeds. Cotton cloth is woven by hand. There is an English middle school.

Kāl̄na Subdivision.—South-eastern subdivision of Burdwān District, Bengal, lying between $23^{\circ} 7'$ and $23^{\circ} 36'$ N. and $88^{\circ} 0'$ and $88^{\circ} 25'$ E., with an area of 399 square miles. This subdivision, like the adjoining subdivision of Kātwa, is flat and alluvial, and the eastern portion along the bank of the Bhāgīrathi is low-lying and marshy. The population in 1901 was 233,269, compared with 231,512 in 1891, the density being 585 persons per square mile. It contains one town, KĀLNA (population, 8,121), its head-quarters; and 698 villages. Nādaṅghāt possesses a large river trade in rice.

Kāl̄na Town.—Head-quarters of the subdivision of the same name in Burdwān District, Bengal, situated in $23^{\circ} 13'$ N. and $88^{\circ} 22'$ E., on the right bank of the Bhāgīrathi. Population (1901), 8,121. Kāl̄na was a place of great importance in Muhammadan times, and the ruins of a large fort which commanded the river are still to be seen. It was formerly the port which supplied the District, and steamers still visit it throughout the year; but it has suffered owing to the competition with the East Indian Railway, and its population has declined. A conspicuous feature of the town is a group of 109 Siva *lingam* temples, which were built in 1809. Kāl̄na was constituted a municipality in 1869. The income during the decade ending 1901-2 averaged Rs. 13,000, and the expenditure Rs. 11,000. In 1903-4 the income was Rs. 16,000, of which Rs. 4,000 was derived from a tax on persons (or property tax) and Rs. 4,000 from a tax on vehicles, &c.; and the expenditure was Rs. 14,000. The town contains the usual public offices; the subsidiary jail has accommodation for 20 prisoners.

Kāl̄ni.—River in Assam. See SURMĀ.

Kāl̄ol Tāluka (1).—Southern *tāluka* of the Kadi *prānt*, Baroda State, with an area of 267 square miles. The population fell from 97,089 in 1891 to 80,532 in 1901. It contains one town, KĀLOL (population, 6,465), the head-quarters; and 88 villages. The *tāluka* presents the appearance of a fairly wooded and well-cultivated plain. The Sābar-mati river just touches its western boundary. The surface soil is *gorāt*, or of a light sandy nature. In 1904-5 the land revenue was Rs. 2,15,000.

Kāl̄ol Town.—Head-quarters of the *tāluka* of the same name, Kadi *prānt*, Baroda State, situated in $23^{\circ} 15'$ N. and $72^{\circ} 32'$ E., on the

Rājputāna-Mālwa Railway. Gaikwār's State lines run from here to Vijāpur on one side, and to Kadi on the other. Population (1901), 6,465. Kālol contains Munsif's and magistrate's courts, a dispensary, a vernacular school, and local offices. An annual grant of Rs. 1,300 is made to the municipality. The town is the centre of a considerable trade in grain.

Kālol Tāluka (2).—Southern *tāluka* of the western portion of Pāñch Mahāls District, Bombay, including the petty subdivision (*pettha*) of Hālol, lying between 22° 15' and 22° 44' N. and 73° 22' and 73° 44' E., with an area of 414 square miles. It contains one town, Kālol (population, 4,446), the head-quarters; and 252 villages. Population in 1901 was 73,796, compared with 87,851 in 1891, the decrease being due to famine. The density, 178 persons per square mile, slightly exceeds the District average. Kālol forms a rich well-wooded plain; its fields fenced with hedges and rows of brab palms; its villages compact and comfortable. Three rivers cross the *tāluka*: from east to west the Mesri in the north, the Goma in the centre, and the Karād in the south. These rivers become torrents in the rains, and trickling streams in the cold season. Light or *gorādu* soil lies all over this part of the country; the black cotton soil is not met with. The petty division of Hālol is a well-wooded and tilled plain surrounding the hill fort of Pāvāgarh. To the east and south, low isolated hills stand out from a rich black-soil plain, most of it waste. Within 4 or 5 miles of the hills the climate is unhealthy and the water often deleterious. Three rivers, the Karād, Visvāmitri, and Devnadī, cross Hālol from east to west. Water lies near the surface. Cultivation is rude, and the peasantry inert. The annual rainfall averages 37 inches. Land revenue (including Hālol) and cesses in 1903-4 amounted to more than 1.1 lakhs.

Kālpī Tahsīl.—Eastern *tahsīl* of Jālaun District, United Provinces, conterminous with the *pargana* of the same name, lying between 25° 53' and 26° 22' N. and 79° 25' and 79° 52' E., with an area of 407 square miles. Population fell from 78,754 in 1891 to 75,692 in 1901. There are 154 villages and one town, KĀLPĪ (population, 10,139), the *tahsīl* head-quarters. The demand for land revenue in 1903-4 was Rs. 1,55,000, and for cesses Rs. 25,000. The density of population, 186 persons per square mile, is the lowest in the District. The *tahsīl* is bounded on the north-east by the Jumna and on the south by the Betwā, while several small drainage channels enter it from the west and unite to form a stream called the Non. In the south-west the soil is inferior *mār*, and this tract has recently suffered from bad seasons and is overgrown with *kāns* (*Saccharum spontaneum*). Near the Jumna the soil becomes lighter, and on the banks of the vast system of ravines which fringe that river and the smaller streams denudation has reduced the

fertility of the land. In 1899-1900 the area under cultivation was 158 square miles, of which only 9 were irrigated.

Kālpi Town.—Head-quarters of the *tahsil* of the same name in Jālaun District, United Provinces, situated in $26^{\circ} 8' N$ and $79^{\circ} 45' E$, on the Jumna, on the road from Cawnpore and Saugor, and on the Great Indian Peninsula Railway. Population (1901), 10,139.

According to tradition Kālpi was founded in the fourth century by one Bāsdeo. It fell into the hands of Kutb-ud-dīn in 1196, and at once became an important fortress of the Musalmāns. In the fifteenth century Ibrāhīm Shāh of Jaunpur made two unsuccessful attempts to seize Kālpi, and in 1435 Hoshang Shāh of Mālwa captured the place. A few years later Ibrāhīm's successor, Mahmūd, was allowed to occupy the town on the plea of chastising the governor. He plundered it, and then refused to restore it to the king of Mālwa, but afterwards came to terms. In the struggle between the Jaunpur kingdom and the rulers of Delhi, which ended with the extinction of the former, a great battle took place near Kālpi in 1477, and Husain Shāh of Jaunpur fled to Kanauj, where he was again defeated. When the victory at Pānīpat in 1526 laid open the plains of Hindustān to Bābar, the Rānā of Chitor and the Afghāns combined to stop his advance, and occupied Kālpi, but were met near the site of Fatehpur Sikri, as they marched on Agra, and defeated. Kālpi was taken in 1527 by Humāyūn after his conquest of Jaunpur and Bihār, and held till 1540, when the Mughals were defeated by Sher Shāh at Kanauj. It was again the scene of fierce contests in the struggles which sapped the Afghān strength before the return to power of the Mughals. Under Akbar Kālpi became the head-quarters of a *sarkār*, which included the adjacent parts of the present Districts of Etāwah, Cawnpore, and Hamirpur, besides Jālaun and portions of the State of Gwalior. When the Marāthās acquired part of Bundelkhand early in the eighteenth century, Kālpi became the head-quarters of their governor. In 1798 the town was captured by the British, but was subsequently abandoned. It again fell into their power, after a few hours' resistance, in 1803, and was granted to Himmat Bahādur. He died in the following year and the grant lapsed, when the town was made over to Gobind Rao of Jālaun, who exchanged it in 1806. After the large District of Bundelkhand was divided into two portions, Kālpi was for a time the head-quarters of the northern division, afterwards called HAMIRPUR DISTRICT. During the Mutiny a great victory was won near here, in May, 1858, by Sir Hugh Rose over a force of 12,000 rebels under the Rānī of Jhānsī, the Rao Sāhib, and the Nawāb of Bāndā, which did much to quell the rebellion in Bundelkhand.

The town is situated among the ravines of the Jumna, and after a long period of decay is again reviving in importance. The western

outskirt contains a number of old tombs, notably that called the Chaurāsi Gumbaz (or 'eighty-four domes'); but ravines now separate these relics of the past from the dwellings of the living. Old Kālpi stands near the river on an elevated site, and is a good specimen of the older type of North Indian town, with darkened plaster walls and flat roofs interspersed with trees, and here and there a temple spire or a Muhammadan dome. The newer portion of the town stretches south-east, and is lower and farther from the river. On the most prominent edge of the steep bank stand the ruins of a fort, but only a single building has survived. This is a masonry room with walls 9 feet thick, said to have been the treasury of the Marāṭhā governor. A fine flight of steps leads from the fort to a bathing *ghāṭ* on the river. A few years ago a lofty tower was built by a local pleader, which is adorned with representations of the battles of the Rāmāyana. It is noteworthy that less prominence is given to Rāmā than to Rāvana his adversary, who is represented as a gigantic many-armed figure, of dignified aspect, about 80 feet in height. The chief public buildings are the *tahsīlī* and dispensary.

Kālpi has been a municipality since 1868. During the ten years ending 1901 the income and expenditure averaged Rs. 11,000. In 1903-4 the income was Rs. 14,000, chiefly derived from octroi (Rs. 9,000); and the expenditure was Rs. 14,000. For many years Kālpi was a great trade centre. Cotton and grain were brought from the south, and sent away to Cawnpore or down the Jumna to Mirzāpur and Calcutta, while the manufactures of sugar-candy and paper were celebrated. The buildings of the East India Company's cotton factory, which was one of the principal stations for providing the annual investment, are still standing. As railways spread and trade routes altered, Kālpi declined, but its commerce is now again increasing. Grain is sent to Southern and Western India, *ghī* to Bengal, and cotton to Cawnpore or Bombay. Two small cotton-gins have recently been opened, and the Forest department is starting plantations of *babul* for the supply of bark to the Cawnpore tanneries. The *tahsīlī* school has 111 pupils, and there are three municipal schools with 170, and a girls' school with 19.

Kālra.—Estate in the District and *tahsīl* of Shāhpur, Punjab, with an area of 13 square miles. For services in the Mutiny a member of the Tiwāna family of Mitha Tiwāna, named Malik Sāhib Khān, Khān Bahādur, C.S.I., obtained a grant of 8,700 acres of waste land in the Shāhpur *tahsīl*. To irrigate this he constructed a canal, and the estate is now a most valuable one. His son, Malik Umar Hayāt, succeeded in 1879. The Malik also owns estates in Shāhpur, Jhelum, and Lyallpur Districts, aggregating nearly 13,000 acres, and the whole property yields an income of about 2 lakhs. Recently the

Malik obtained a horse-breeding grant of 2,270 acres in the Jhelum Colony.

Kalrāyan Hills.—These hills are situated partly in the Atūr and Uttangari *tālūks* of Salem District and partly in South Arcot District, Madras, lying between $11^{\circ} 38'$ and $12^{\circ} 4'$ N. and $78^{\circ} 28'$ and $78^{\circ} 49'$ E. They stand east of the Tenandamalai, being separated from it by the Kottapatti valley, and are perhaps the largest in superficial extent of the hill ranges in Salem District. Different portions of the range have local names, but the principal divisions are the Periya ('big') Kalrāyans, which attain an elevation of 4,300 feet, and the Chinna ('little') Kalrāyans, reaching to little above 3,000 feet. The temple of Kari Rāman in the Periya Kalrāyans is held in great reverence by the Malaiyālis who inhabit these hills. The range is parcelled out into five *jāgīrs* or estates, the owners of which govern their tenants in a primitive and patriarchal fashion. The fever on the range is so dreaded that few dwellers on the plains ever go up it, and consequently the people have retained many curious customs which differ from those of the low country. They are exclusively of the caste known as Malaiyālis; but there is no doubt that they are not a distinct race, but merely Tamils who at some remote period took refuge in these hills from the troublous times through which the plains were passing.

Kālsi.—Town in the Chakrātā *tahsīl* of Dehra Dūn District, United Provinces, situated in $30^{\circ} 32'$ N. and $77^{\circ} 51'$ E., close to the confluence of the Jumna and the Tons, on the military road from Sahāranpur to Chakrātā, 52 miles from the former and 25 miles from the latter. Three miles away the road crosses the Jumna by an iron girder-bridge. Population (1901), 760. The place has declined owing to the transfer of the *tahsīl* head-quarters to Chakrātā. Kālsi is administered under Act XX of 1856, the annual income and expenditure amounting to Rs. 300 or Rs. 400. It is chiefly remarkable for a large quartz boulder in the neighbourhood on which are sculptured the celebrated edicts of Asoka; one of these gives the names of contemporary kings in Western Asia, Greece, and Egypt¹.

Kalsia.—Native State in the Punjab, under the political control of the Commissioner, Delhi Division. It comprises twenty detached pieces of territory in Ambāla and Ferozepore Districts, lying mainly between $30^{\circ} 12'$ and $30^{\circ} 25'$ N. and $77^{\circ} 21'$ and $77^{\circ} 35'$ E. The present Sardār of the State, Ranjīt Singh, is a descendant of Sardār Gurbakhsh Singh, a Jat of Kalsia near Lahore, who joined the Kroria *misl* or confederacy of the Sikhs. His son Jodh Singh, a man of ability and prowess, effected considerable conquests on both sides of the Sutlej, but eventually the family lost all those north of the river. When the Cis-Sutlej States came under British protection, Sardār Jodh

¹ *Corpus Inscriptionum Indicarum*, vol. i, pp. 12 and 117.

Singh, after some hesitation, followed the general example. The State has an area of 168 square miles, and a population (1901) of 67,131. It is divided into two *tahsīls*, Chhachhrauli and Basi, with the isolated sub-*tahsil* of Chirak, in Ferozepore District. It contains two towns, CHHACHHRAULI (population, 5,520) and BASI (4,641); and 181 villages. In 1903-4 the revenue amounted to 1.9 lakhs, of which 1.2 lakhs was land revenue. The State was regularly settled in 1891. It had suffered considerably from over-assessment, and its people had been impoverished. The excise administration is leased to the British Government for Rs. 6,000 per annum.

Kalsūbai.—Hill in Ahmadnagar District, Bombay, situated in 19° 36' N. and 73° 42' E., 5,427 feet high, and the most elevated point in the Deccan. Its summit is crowned by a temple, 10 miles south-east of Igatpuri, a station on the north-east branch of the Great Indian Peninsula Railway. A priest of Devī Kalsū daily climbs to the temple from Indor, a village at the foot of the hill, to offer a sacrifice of fowls. The shrine is visited by large numbers of Kolis.

Kalugumalai (*kalugu*, 'an eagle,' and *malai*, 'a hill').—Village in the Ettaiyāpuram *zamīndāri* and the Ottappidāram *tāluk* of Tinnevely District, Madras, situated in 9° 8' N. and 77° 42' E., 28 miles north of Tinnevely town and 12 miles from Sankaranayinārkovil. Population (1901), 4,827. It contains a celebrated rock-cut temple dedicated to the god Subrahmanya, and many Jain sculptures and inscriptions. The temple is similar in style to the SEVEN PAGODAS in Chingleput District, and is thought to have been built in the tenth or eleventh century. An annual festival and cattle fair in February attract a large number of people from the southern Districts and even from Mysore.

Kālukhera.—*Thakurāt* in the MĀLWĀ AGENCY, Central India.

Kalvakurti.—Eastern *tāluk* of Mahbūbnagar District, Hyderābād State, with an area of 583 square miles. The population in 1901, including *jāgīrs*, was 54,384, compared with 52,132 in 1891. The *tāluk* in 1901 contained 101 villages, of which 31 are *jāgīr*, and Kalvakurti (population, 2,230) is the head-quarters. The land revenue was Rs. 85,000. In 1905 this *tāluk* received some additions from the adjoining *tāluk* of Jedcherla, and now contains 99 *khālsa* villages.

Kalvān.—North-western *tāluka* of Nāsik District, Bombay, lying between 20° 21' and 20° 42' N. and 73° 40' and 74° 20' E., with an area of 494 square miles. There are 188 villages, but no town. The population in 1901 was 53,616, compared with 60,417 in 1891. The density, 109 persons per square mile, is much below the District average. The head-quarters are at Kalvān. The demand for land revenue in 1903-4 was Rs. 91,000, and for cesses Rs. 6,000. The

west is covered with steep bare hills; towards the east the country, though flatter and more fertile, is divided by a spur running south-east from the Western Ghāts; in the south rises the high and rugged Saptashring range, with its lower slopes fringed with teak. The annual rainfall averages 25 inches.

Kalyān Tāluka.—Southern *tāluka* of Thāna District, Bombay, lying between $19^{\circ} 4'$ and $19^{\circ} 24'$ N. and $73^{\circ} 1'$ and $73^{\circ} 24'$ E., with an area of 276 square miles. It contains one town, KALVĀN (population, 10,749), the head-quarters; and 224 villages. The population in 1901 was 77,087, compared with 80,171 in 1891. The density is 279 persons per square mile, or rather more than the District average. Land revenue and cesses in 1903-4 amounted to 2.2 lakhs. The *tāluka* is triangular in form, and in its western part a rich open plain. In the south and east, ranges of hills running parallel with the boundary line throw out spurs into the heart of the plain. The transport of produce is facilitated by the tidal creek of the Ulhās river and by the Great Indian Peninsula Railway. The river Kālu is navigable by boats of 10 tons for 9 miles above Kalyān town. There are disagreeable east winds in April and May; but although fever is prevalent in the cold season, the climate is on the whole temperate and healthy.

Kalyān Town.—Head-quarters of the *tāluka* of the same name in Thāna District, Bombay, situated in $19^{\circ} 14'$ N. and $73^{\circ} 10'$ E., at the junction of the north-east and south-east lines of the Great Indian Peninsula Railway, 33 miles north-east of Bombay. Population (1901), 10,749. Kalyān has been a municipality since 1855. The municipal income during the decade ending 1901 averaged Rs. 19,000. In 1903-4 the income was Rs. 19,579. It has a considerable rice-husking trade, carried on by Muhammadans and some Marāthās. This industry gives occupation to about 750 persons, half of whom are women. There is also a trade in tobacco, dried fish, bricks, tiles, and myrabolans. The streets and lanes in the town are metalled, and kept in clean condition. A ferry plies across the Ulhās river to Kone on the opposite bank. The town has a vegetable market built by the municipality. It is supplied with water from the Shenala lake about a quarter of a mile to the east.

The name of Kalyān appears in ancient inscriptions, which have been attributed to the first, second, fifth, or sixth century A.D. According to the *Periplus*, Kalyān rose to importance about the end of the second century. Cosmas Indicopleustes, in the sixth century, mentions it as one of the five chief marts of Western India, the seat of a powerful king, with a trade in brass, black-wood logs, and articles of clothing. Early in the fourteenth century the Muhammadans found Kalyān the capital of a district, and gave it the name of Islāmābād.

It was taken by the Portuguese in 1536. They did not garrison the town, but, returning in 1570, burnt the suburbs and carried off much booty. From this time it seems to have formed part of the Ahmad-nagar kingdom. In 1648 Sivaji's general, Abāji Sondeo, surprised Kalyān and took the governor prisoner. The Muhammadans recovered the town in 1660, but again lost it in 1662. In 1674 Sivaji granted the English leave to establish a factory. The Marāthās in 1780 having cut off their supplies, Kalyān was seized by the British, and has since remained in their possession. Objects of interest are the Shenali tank, said to have been built in 1505; the tomb of Motabar Khān, minister of Shāh Jahān, who was sent in disgrace to Kalyān when Aurangzeb usurped his father's throne; and seven mosques, of which the graceful Kālī Masjid is the most noteworthy. The town contains a Sub-Judge's court, a dispensary, an English school with 87 pupils, 7 vernacular schools for boys with 358 pupils, and one for girls with 96. There are also a library, a small printing press, and a rice-husking mill.

Kalyandrug Tāluk.—Westernmost *tāluk* of Anantapur District, Madras, lying between $14^{\circ} 14'$ and $14^{\circ} 44'$ N. and $76^{\circ} 51'$ and $77^{\circ} 23'$ E., with an area of 817 square miles. The population in 1901 was 76,977, compared with 72,730 in 1891. Originally part of the Dharmavaram *tāluk*, it was separated at the end of 1893. It contains 70 villages and one town, KALYANDRUG (population, 8,815), the head-quarters. The demand for land revenue and cesses in 1903-4 amounted to Rs. 1,30,000. No less than 88 per cent. of the 'dry' land pays an assessment of four annas or less per acre. The *tāluk* is rocky and barren, the soil stony and very poor, and the rainfall less than 21 inches per annum. Consequently it is bare and uninviting, and the density of population is less than 100 per square mile, being lower than in any *tāluk* in the Presidency except those which are covered with hill and forest. The northern portion has a little black cotton soil and is slightly richer.

Kalyandrug Town.—Head-quarters of the *tāluk* of the same name in Anantapur District, Madras, situated in $14^{\circ} 33'$ N. and $77^{\circ} 6'$ E. Population (1901), 8,815. It was formerly a place of some importance, containing a District Munsif's court, but now, being off the railway and in the centre of a very barren tract, it is in a decaying state. It lies in a hollow surrounded by hills, two of which are 2,400 feet high. The ruins of an old fort and the buildings connected therewith still stand, but are of no antiquarian interest. On the higher of the two hills above referred to, and in the neighbouring village of Mudigallu, are some hundreds of prehistoric kistvaens. On the hill are also three curious circular mounds of earth, about 3 feet in height and some 10 or 11 yards in diameter. All round them are planted, upright in

the earth, slabs of stone of irregular shape, which stand from 4 to 5 feet above the ground.

Kalyāni.—A *jāgīr* town in Bīdar District, Hyderābād State, situated in $17^{\circ} 53' N.$ and $76^{\circ} 57' E.$, 36 miles west of Bīdar town. Population (1901), 11,191. About the middle of the eleventh century Someshwar I made Kalyāni the capital of the Chālukyan kingdom. A hundred years later the power was usurped by Bijjala Kalachuri, the commander-in-chief, and before the close of the twelfth century the Chālukya power was at an end. While Kalyāni remained a great capital, it was noted as the residence of Vijnāneshwar, the author of the treatise on law known as the *Mitākshara*, and of Basava who founded the Lingāyat sect. Further particulars about Basava and the Lingāyats will be found in the article on MYSORE STATE. The Kalachuris were succeeded by the Yādavas of Deogiri (DAULATĀBĀD); and after the establishment of the Bahmani dynasty, Kalyāni passed into their possession in the fourteenth century, and subsequently into that of Bijāpur. The Mughals sacked it in 1653. In 1656 Aurangzeb invested the fortress, which surrendered after an heroic defence. During the contests which followed the decline of Chālukyan power, and the struggles between various Muhammadan rulers, the magnificent temples which once adorned the place were demolished or converted into mosques.

Kama.—South-western township of Thayetmyo District, Burma, lying between $18^{\circ} 52'$ and $19^{\circ} 18' N.$ and $94^{\circ} 39'$ and $95^{\circ} 13' E.$, and extending from the Irrawaddy in the east to the Arakan Yoma on the west. The area of the township, which is intersected by low hills, is 575 square miles, and it contains 201 villages. The population in 1891 was 41,383, and in 1901, in consequence of emigration to the delta, it had fallen to 39,570 (including 2,500 Chins). The head-quarters are at Kama (population, 1,779), a village situated on low hills on the right or western bank of the Irrawaddy. In 1903-4 the area under cultivation was 50 square miles, paying Rs. 53,000 land revenue.

Kāma.—*Tahsīl* and head-quarters thereof in Bharatpur State, Rājputāna. See KĀMAN.

Kamadhia.—Petty State in KĀTHIĀWĀR, Bombay.

Kamaing.—North-western township of Myitkyinā District, Upper Burma, lying between $25^{\circ} 30'$ and $26^{\circ} N.$ and 96° and $97^{\circ} E.$, with an area of 2,650 square miles. The population in 1901 was only 9,687, half of whom were Kachins, a fourth Shans, and one-sixth Burmans. It contains 126 villages, of which all but five are in the Kachin Hill Tracts. Kamaing (population, 1,079), where there is a strong military police post, is the head-quarters. In 1903-4 the area cultivated was 600 acres, apart from *taungyas*; but the greater part of the township is forest. The land revenue and *thathameda* amounted to Rs. 5,000.

Kāmākhyā.—A temple, sacred to Satī, which stands on the beautiful Nilāchal hill overhanging the Brahmaputra, about 2 miles west of Gauhāti, in Kāmṛup District, Eastern Bengal and Assam, in $26^{\circ} 10' N.$ and $91^{\circ} 45' E.$ According to tradition, the temple was originally built by Naraka, a prince who is said to have flourished at the time of the Mahābhārata, and to have constructed a stone-paved causeway up the hill, which is still in existence. It was rebuilt by Nar Nārāyan about A.D. 1565, and on the occasion of its consecration 140 human heads were offered to the goddess, but only a small portion of Nar Nārāyan's temple now remains. Satī's organs of generation are said to have fallen on the place now covered by the temple, and this fact renders the spot an object of pilgrimage to devout Hindus from every part of India. Six other temples stand on the hill, and from the summit a magnificent view is obtained over the river and the surrounding country. A grant of revenue-free land, nearly 8,000 acres in extent, made to the goddess by the native rulers of Assam, has been confirmed by the British Government. The most important festivals are the Pous Bia, about Christmas time, when Kāmākhyā is married to Kāmeswar, and the Basanti and Durgā *pūjās*, which are celebrated, the former in the spring, the latter in the autumn.

Kamālia (Kot Kamālia).---Town in the District and *tahsīl* of Montgomery, Punjab, situated in $30^{\circ} 43' N.$ and $72^{\circ} 40' E.$, 27 miles west of Montgomery town, and 14 from Chichāwatni station on the North-Western Railway. Population (1901), 6,976. It is identified by Cunningham as one of the towns of the Malli taken by Alexander. The modern town was founded by a Kharral chief named Khān Kamāl in the fourteenth century. In 1857 the insurgent tribes held the place for a week, and completely sacked it. The municipality was created in 1868. The income during the ten years ending 1902-3 averaged Rs. 9,300, and the expenditure Rs. 8,700. In 1903-4 the income was Rs. 8,800, derived mainly from octroi, and the expenditure Rs. 10,200. Since British annexation a brisk trade in the produce of the Rāvi lowlands has sprung up, and the importance of Kamālia has been immensely increased by the opening of the North-Western Railway. The town is now a place of considerable commerce, dealing in wheat, grain, and pulses from the surrounding villages and Jhang; *gur* and sugar from Jullundur and Amritsar; piece-goods from Karāchi, Amritsar, and Delhi. The exports are chiefly cotton, *għi*, and wool. Excellent cotton prints and carpets are manufactured. The town contains an Anglo-vernacular middle school, a private high school, and a dispensary.

Kamālpur.—Petty State in KĀTHIĀWĀR, Bombay.

Kamālpur.—*Thakurāt* in the BHOPĀL AGENCY, Central India.

Kāman.—Head-quarters of a *tahsīl* of the same name in the State

of Bharatpur, Rājputāna, situated in $27^{\circ} 39'$ N. and $77^{\circ} 16'$ E., about 36 miles north-by-north-west of Bharatpur city. Population (1901), 12,083. The town contains a vernacular school attended by 140 boys, and a dispensary. The old name of the place is said to have been Kadamba-vana (contracted to Kāmavana), from the number of *kadamb* trees (*Anthocephalus Cadamba*) found here; another account traces its name to a mythical Rājā Kāmsen. Kāman is one of the twelve holy places of the Braj Mandal (see MUTTRA DISTRICT), and its shrine of Gopīnāth is regularly visited by pilgrims. In the middle of the town is an old fort, in which are many fragments of Hindu sculpture, and a mosque called Chaurāsi Khambā ('84 pillars'). None of these pillars is without ornament, and some are very highly decorated. On one of them is a Sanskrit inscription of the Sūrasenas; it bears no date, but is believed to belong to the eighth century, and records the building of a temple to Vishnu.

[*Indian Antiquary*, vol. x; *Archaeological Survey of Northern India*, vol. xx.]

Kāmāreddipet.—*Tāluk* in Nizāmābād District, Hyderābād State. In 1901 the area was 413 square miles, and the population, including *jāgīrs*, was 64,933, compared with 63,366 in 1891. The *tāluk* had 96 villages, of which 25 were *jāgīr*, Kāmāreddipet (population, 2,503) being the head-quarters. The land revenue in 1901 was 2.2 lakhs. In 1905 the *tāluk* was enlarged by the transfer of villages from the Medak and Rāmāyampet *tālucs* of Medak District, and Sirsilla in Karīmānagar (formerly Elgandal). It is hilly in some parts.

Kāmārhāti.—Town in the Barrackpore subdivision of the District of the Twenty-four Parganas, Bengal, situated in $22^{\circ} 40'$ N. and $88^{\circ} 23'$ E., on the east bank of the Hooghly river. Population (1901), 13,216. Within this municipality is the greater part of the village of Dakhineswar, with its group of temples called Rānī Rāsmānī's Nabaratna. These consist of two beautiful central temples, dedicated to Kālī and Krishna, faced by twelve minor temples in honour of Siva. Kāmārhāti was formerly included within the Baranagar municipality, but in 1899 a separate municipality was constituted. The income during the five years since the formation of the separate municipality has averaged Rs. 16,000, and the expenditure Rs. 15,000. In 1903-4 the income was Rs. 17,700, of which Rs. 7,000 was obtained from a tax on houses and lands and Rs. 8,000 from a conservancy rate; and the expenditure was Rs. 16,600.

Kamāsin.—*Tahsil* of Bāndā District, United Provinces, continuous with the *pargana* of the same name, lying along the Jumna between $25^{\circ} 17'$ and $25^{\circ} 38'$ N. and $80^{\circ} 47'$ and $81^{\circ} 12'$ E., with an area of 358 square miles. Population fell from 83,297 in 1891 to 78,773 in 1901. There are 169 villages, but no town. The demand

for land revenue in 1903-4 was Rs. 1,18,000, and for cesses Rs. 20,000. The density of population, 220 persons per square mile, is slightly above the District average. Besides the Jumna, the Bāghain and Paisunī drain the *tahsil*, flowing from south-west to north-east to join the great river. Some of the best cotton produced in the District is grown in Kamāsin. In 1903-4 less than half a square mile was irrigated, out of 205 square miles under cultivation. The Ken Canal, when completed, will serve a small area in the west of this *tahsil*.

Kamātāpur.—Ruined city in Cooch Behār State, Bengal, situated in 26° 23' N. and 89° 21' E. The city is reputed to have been founded by Rājā Niladhvaj, the first of the Khen kings. Its ruins indicate that it must have been a very extensive place. Dr. Buchanan Hamilton in 1809 found that it occupied an area 19 miles in circumference, 5 of which were defended by the Dharlā, and the rest by a rampart and ditch. The city consisted of several enclosures, one within the other, the centre one being occupied by the king's palace. Kamātāpur was abandoned and fell into decay after the overthrow of Rājā Nīlāmar by Alā-ud-din Husain, king of Bengal, towards the close of the fifteenth century. Kamātāpur figures conspicuously as Comotay in some of the earlier maps of India.

[Sir W. W. Hunter, *Statistical Account of Bengal* (1876), vol. x, pp. 362-70.]

Kambam.—*Tāluk* and town in Kurnool District, Madras. *See* CUMBUM.

Kambar Tāluka.—*Tāluka* of Lārkāna District, Sind, Bombay, lying between 27° 19' and 27° 52' N. and 67° 14' and 68° 10' E., with an area of 627 square miles, of which about one-fifth is *jāgr* land belonging to Ghaibi Khān Chandiā. The population in 1901 was 88,527, compared with 79,019 in 1891. The *tāluka* contains one town, KAMBAR (population, 4,807), the head-quarters; and 92 villages. The density, 141 persons per square mile, slightly exceeds the District average. The land revenue and cesses in 1903 amounted to 3.6 lakhs. The *tāluka* depends upon the Ghar canal and its branches for cultivation. Rice of excellent quality is the principal crop; but owing to excessive irrigation the country is malarious. The same circumstance renders it one of the finest shooting grounds for wild fowl in Northern India.

Kambar Town.—Head-quarters of the *tāluka* of the same name in Lārkāna District, Sind, Bombay, situated in 27° 36' N. and 68° 3' E., about 12 miles by road west by north from Lārkāna town, and a station on the North-Western Railway. Population (1901), 4,807. The municipality, established in 1862, had an average income during the decade ending 1901 of Rs. 12,300, derived mostly from town dues, cattle-pound fees, and fisheries. In 1903-4 the income was Rs. 17,000.

The town was plundered by the Baluchis in 1848, and almost destroyed by fire in the following year. It contains a dispensary, an Anglo-vernacular and a vernacular school, attended respectively by 46 and 93 pupils.

Kameri.—Village in the Vālva *tāluka* of Sātāra District, Bombay, situated in 17° N. and 74° 19' E. Population (1901), 5,052. The village, which lies on the main road to Kolhāpur, had formerly a large Muhammadan population. Old tombs and ruined mosques may still be seen, while within its limits is a tank designed to supply water to Islāmpur.

Kāmīlpur.—Cantonment and head-quarters of Attock District, Punjab. See CAMPBELLPORE.

Kamlagarh.—Ancient fortress in Mandī State, Punjab, situated in 31° 48' N. and 76° 43' E., near the south bank of the Beās. It consists of a line of detached bastions, castles, and towers, about 3 miles in length, constructed partly of masonry and partly of the natural sand-stone rock. The principal stronghold crowns an isolated peak, whose precipitous sides tower 1,500 feet above the Beās, with double that elevation above sea-level. Kamlagarh played an important part in the earlier history of Mandī, and even Sansār Chand, Rājā of Kāngra, attacked the fortifications unsuccessfully. Their possession tempted the Mandī Rājā to revolt against the Sikhs: but General Ventura, the Sikh commander, succeeded in carrying them in 1840, in spite of the popular belief in their impregnability.

Kampil.—Village in the Kaimganj *tahsil* of Farrukhābād District, United Provinces, situated in 27° 35' N. and 79° 14' E., 28 miles north-west of Fatehgarh. Population (1901), 2,366. Kampil is mentioned in the Mahābhārata as the capital of South PANCHALA, under king Drupada. Here his daughter, Draupadī, married the five Pāndava brethren. The villagers still show the mound where the Rājā's castle stood, and the place, a few miles away, where the *swayamvara*, or ceremony at which Draupadī chose her husband, took place. At the end of the thirteenth century, Kampil appears as a nest of highway robbers, against whom the emperor Ghiyās-ud-dīn Balban marched a force in person, and built here a fort. The town and its vicinity constantly gave trouble in later years, but the Rāthor inhabitants were gradually suppressed. West of the town stretches a long series of ruins in which ancient coins are found. There are a fine Jain temple and a primary school with about 60 pupils.

Kampli.—Town in the Hospet *tāluka* of Bellary District, Madras, situated in 15° 25' N. and 76° 36' E., on the bank of the Tungabhadra. Population (1901), 9,803. Until 1851 it was the head-quarters of the Hospet (then called the Kampli) *tāluka*, but it is now declining in importance. The town has an ancient history, having been a Chālukyan

capital in the eleventh century ; and its fort, which stands on the river bank at the end of a most picturesque reach, must have been of some strength. It is now being deserted in favour of the more healthy suburb known as the *petta*, which is farther from the river and raised above the irrigated land, and consequently less malarious. The only industry is the weaving of silk fabrics. It is doubtful whether even this is what it was a dozen years ago. The weavers are unprogressive, and most of them have fallen into the hands of the local capitalists, who advance materials and take the stuffs they weave, paying them only for their labour. The town is surrounded by irrigated land watered from channels from the Tungabhadra, and a good deal of coarse sugar is still made ; but this does not command its former price, having been largely ousted by the superior article refined by European processes.

Kamptee (*Kāmtlū*).—Town with cantonment in Nāgpur District, Central Provinces, situated in $21^{\circ} 13' N.$ and $79^{\circ} 12' E.$, on the Bengal-Nāgpur Railway, 10 miles from Nāgpur city and 529 from Bombay. It stands on the right bank of the Kanhān river, and the cantonment extends in a long narrow line beside the river, with the native town to the south-east. The population at the four enumerations was as follows : (1872) 48,831 ; (1881) 50,987 ; (1891) 53,159 ; (1901) 38,888. The population in 1901 included 26,379 Hindus, 9,852 Muhammadans, and 1,851 Christians, of whom 1,036 were Europeans and Eurasians. Kamptee is the fourth town in the Province in respect of population. The ordinary garrison consists of a battalion of British infantry, one of Native infantry, and a field battery. Kamptee was until recently the head-quarters of the general commanding the Nāgpur district ; but this appointment has now been abolished, and the garrison is at present commanded from Ahmadnagar. The cantonment was established in 1821, and was made the head-quarters of the Subsidiary force maintained by the British under treaty with the Nāgpur Rājā. The whole town is included in the cantonment. The receipts and expenditure of the cantonment fund during the last decade averaged 1.1 lakhs. In 1903-4 the receipts were Rs. 1,06,000 and the charges Rs. 1,18,000. During Marāthā rule traders flocked to Kamptee on account of the comparative immunity from taxation which they enjoyed within the cantonment, and a large commercial town thus grew up alongside it. Owing to its favourable situation on the roads leading to Nāgpur from the Sātpurā plateau, Kamptee for a long period monopolized the trade from this area ; and it is only within comparatively recent years that the advantages possessed by Nāgpur, as the larger town and capital of the Province, have enabled it gradually to attract to itself the commercial business of Kamptee. To this transfer of trade are to be attributed the stationary or declining figures

of population during the last thirty years, and the construction of the Sātpurā railway may tend to accelerate the process. The town contains three cotton-ginning and two pressing factories with a total capital of 2.4 lakhs, three of which were opened in 1891 and 1892 and the others since 1900. Muhammadan hand-weavers produce the cheaper kinds of cloth. Weekly cattle and timber markets are held, and the town contains one printing press. The Cantonment Magistrate, who has also the powers of a Small Cause Court Judge, has jurisdiction over the cantonment. The educational institutions comprise a Government high school, one English middle, two vernacular middle, and eleven primary schools. The Convent of St. Joseph maintains a boarding and day school for European children, teaching in some cases up to the matriculation standard, orphanages for native children, and a dispensary. Medical relief is afforded to the civil population at the Cantonment General Hospital and a branch dispensary in the town.

Kāmṛūp.—District of Eastern Bengal and Assam, lying between $25^{\circ} 43'$ and $26^{\circ} 53'$ N. and $90^{\circ} 39'$ and $92^{\circ} 11'$ E., with an area of 3,858 square miles. It is bounded on the north by Bhutān; on the east by Darrang and Nowgong; on the south by the Khāsi Hills; and on the west by Goālpāra. The Brahmaputra flows through the

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District, and divides it into two unequal portions, about two-thirds of the total area being on the right or northern bank. South of the Brahmaputra the country is much broken by the outlying spurs of the Khāsi Hills which project into the valley, and low ranges of hills appear even on the north bank of the river. The scenery is thus pleasingly diversified, and the Gauhāti reach, enclosed in a circle of forest-clad hills, is extremely beautiful. The centre of the District is a broad plain, the greater part of which is covered with rice-fields, with dotted groves of bamboos concealing the villages of the Assamese; but farther north the land becomes too high for rice cultivation, and grassy uplands stretch to the foot of the outlying ranges of hills. The principal tributaries of the Brahmaputra are: on the north bank, the BARNADĪ, which once formed the boundary between Darrang and Kāmṛūp; the Baraliā; the Chaulkhoā, which empties itself into the Manās; and the MANAS, a large river which formerly marked the boundary of Goālpāra District. These rivers take their rise in the Himālayas, and the swiftness of their current frequently causes them to cut away their banks and change their courses. At the foot of the northern hills there is a tract of gravel and sand, in which many of the minor streams vanish, to appear again some distance farther off. On the south bank the only rivers of any importance are the DIGRU, the KULSI, and the Singrā. All over the District are found numerous swamps, or *bils*, in many

of which the water lies even during the dry season. The most extensive are the Dipār *bi*, about 8 miles west of Gauhāti, the Bildārā *bi* in the Palāsbāri *tahsil*, and the Asuchi *bi* in the Hājo *tahsil*.

The plain is of alluvial formation, composed of sand and clay in varying proportions. South of the Brahmaputra low ranges of gneissic rock project from the Khāsi Hills, and outliers are found on the north bank of the river.

The base of the southern hills is forest-clad; but to the north the country is covered with short grass, and is destitute of trees. High reeds and jungle grass spring up in great luxuriance on all low-lying land, and the forest is rendered beautiful by great ferns and the graceful foliage of the creeping cane.

Elephants and bison are still found in the low hills, and rhinoceros and buffalo in the marshes; tigers, leopards, bears, hog, and several species of deer are not uncommon. In 1904, 12 men and 2,709 animals were killed by wild beasts, though rewards were paid for the destruction of 201 tigers and leopards. The principal kinds of small game are hares, partridges, wild duck and geese, florican, and snipe.

The climate of the District does not differ materially from that of the rest of the Assam Valley; between November and the middle of March it is cold and pleasant, but during the rest of the year warm and damp. The *tarai* at the foot of the Khāsi Hills is particularly unhealthy. The prevailing direction of the wind is from the north-east, and during the cold season fogs gather daily in the early morning over the valley of the Brahmaputra.

The annual rainfall at Gauhāti averages only 67 inches, but near the hills 80 or 85 inches are received. The rainfall, though invariably abundant, is sometimes unfavourably distributed, and the rice crop suffers from the premature cessation of the monsoon. The greatest natural calamity from which the District has suffered was the earthquake of June 12, 1897. The Government offices and nearly all masonry buildings in Gauhāti were wrecked, and roads and bridges were destroyed. The drainage of the District was obstructed, the levels appear to have been altered, and large tracts of fertile land were rendered unfit for cultivation. After the earthquake the floods of the Brahmaputra were of exceptional severity, and agriculture received a serious check.

The District originally formed part of the ancient Hindu kingdom of Kāmarūpa, which, according to the Jogini Tantra, included the whole of the Brahmaputra Valley, with Rangpur and Cooch Behār. One of the earliest kings, Bhagadatta, whose capital was situated at Prāgyotishapura, the modern Gauhāti, is said to have fought on the losing side in the great war

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of the Mahābhārata ; but the history of the country up to a recent date is involved in great obscurity. In the sixteenth century Kāmrūp formed part of the territory of the Koch dynasty. The king, Nar Nārāyan, waged successful war against the Ahoms and the Rājās of Cāchār, Jaintiā, Sylhet, and Tippera ; but the kingdom was divided, and the territory east of the Sankosh, which includes the present Kāmrūp, was allotted to Nar Nārāyan's nephew, Raghu Rai, while his son Lakshmī Nārāyan retained as much of the kingdom as lay west of that river. Disputes soon broke out between the two branches of the family, and the Muhammadans were called in on one side, the Ahoms on the other. The struggle between these powers continued for some years, but the Muhammadans at last succeeded in inflicting a decisive defeat upon their opponents, and occupied Gauhāti in 1637. This was not, however, the first occasion on which the Muhammadans had invaded Assam. At the beginning of the thirteenth century expeditions had been dispatched up the valley of the Brahmaputra ; but the raiders, though for a time successful, were unable to retain their hold upon the country. Two of their leaders in the sixteenth century are still well remembered : Turlak, the remnants of whose army were finally converted into the degraded Muhammadan caste known as Moriās ; and Kālā Pāhār, who is said to have partially destroyed the sacred temples at Kāmākhyā and Hājo. The last and greatest invasion was that of Mīr Jumla in 1660-2. This general, though at first successful, was subsequently overcome by the difficulties of the climate and the country, and was compelled to retreat with the loss of all his guns. The Muhammadan frontier was then fixed at Goālpāra, and Kāmrūp was absorbed into the Ahom kingdom, Gauhāti becoming first the head-quarters of the viceroy of Lower Assam, and at the end of the eighteenth century of the Rājā himself. By this time the power of the Ahom king had been completely undermined, and Captain Welsh was sent into the valley in 1792 to put a stop to the anarchy then prevailing. He was recalled two years later ; and Assam again became a scene of internecine struggles, which culminated in the occupation of the Burmese, who ravaged the Province with fire and sword. In 1826, after the first Burmese War, Kāmrūp, with the rest of the valley of the Brahmaputra, was ceded to the British. The Duārs at the foot of the Himālayas remained, however, in possession of the Bhotiās till 1841. In that year they were annexed and compensation paid to the hillmen for their loss of territory. On the outbreak of the Bhutān War in 1864, Dewāngiri was occupied by British troops, but they subsequently retired from the post with undue precipitation. The village was recaptured in April, 1865, and since that date has formed a part of British territory. The head-quarters of the Assam Division were originally fixed at Gauhāti ; but in 1874, when Assam

was separated from Bengal, Shillong was chosen as the seat of government.

Gauhāti contains numerous tanks and temples, and is surrounded by extensive earthworks, which bear witness to the importance of the kingdom of which it formed the capital. The remains of a large number of Hindu temples are scattered over the District, the most important being those at KĀMĀKHYA just below Gauhāti, and at HĀJO, about 15 miles by road north-west of that place.

The population of the District at the last four enumerations was : (1872) 561,681, (1881) 644,960, (1891) 634,249, and 1901 (589,187). The decrease in the last two decades is due to the ravages of a peculiarly malignant form of fever known

as *kalā azār*, and to general unhealthiness ; but it is believed that since 1899 the population has been again increasing. The District is divided into two subdivisions, GAUHĀTĪ and BARPETĀ, with head-quarters at the towns of the same name, and contains 1,716 villages. The following table gives the area, number of towns and villages, and population, according to the Census of 1901 :--

Subdivision.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write
		Towns	Villages.				
Barpetā . . .	1,274	1	600	115,935	91	— 14.5	4,520
Gauhāti . . .	2,584	1	1,116	473,252	183	— 5.0	16,228
District total	3,858	2	1,716	589,187	153	— 7.1	20,748

Hindus formed 69 per cent. of the population, and Muhammadans 9 per cent., while 21 per cent. were animistic tribesmen. How little the District has been affected by outside influences can be judged from the fact that 83 per cent. of the population in 1901 spoke Assamese and 11 per cent. Bodo or plains Kāchāri ; while only 3 per cent. of the population enumerated there had been born outside its boundaries. Kāmṛūp is further peculiar in that the women exceeded the men in numbers.

The principal Hindu caste is the Kalitā (115,600), a respectable caste supposed to be the descendants of Aryans who had immigrated to Assam before the functional division of caste was introduced into Bengal. The Koch, into whose ranks converted Kāchāris are received, are also numerous (93,800), and so are the Kewats (41,600). The Shāhās (14,100) are by tradition liquor-sellers, but have taken to agriculture, and have succeeded in obtaining a respectable position in Assamese society. The District contains many shrines, and Brāh-

mans (23,100) are found in much larger numbers than in the rest of the Assam Valley. The principal aboriginal tribes are the Kāchāris (92,100), and the Rabhās, who are closely akin to them (16,300), the Mikirs (10,600), the Gāros, and the Lalungs. All of these tribes are members of the great Bodo race, which is supposed to have entered the valley from North-Western China many centuries ago. Agriculture supports 81 per cent. of the population, a lower proportion than in the other plains Districts of the Province. The number of priests, fishermen, and beggars is, however, unusually high, the strength of the last-named class giving some indication of the misfortunes which Kāmrūp has recently experienced. There is a branch of the American Baptist Mission at Gauhāti, and the great majority of the native Christians (1,379) in 1901 are members of the sect.

Broadly speaking, the District on either side of the Brahmaputra is divided into three belts of land with different characteristics. The

Agriculture. first is the *chapari*, or tract bordering on the river, which is subject to deep inundation during the rains, but dries rapidly at the approach of the cold season. The soil is usually a light loam, on which rank jungle springs up with great rapidity, but which yields, when cultivated, excellent crops of mustard and summer rice, though the latter is liable to be destroyed by an early rise of the river. Permanent villages are never found here, and the land is generally abandoned after it has been cultivated for two or three years. This riverain tract merges gradually into a broad plain, in which transplanted winter rice (*sālī*) is the staple crop; in the intermediate stage, where the water lies too deep to admit of transplantation, *baō*, a long-stemmed variety of winter rice, is sown broadcast. Lastly, the high land under the hills is well drained and free from risk either of flood or drought, as it can be irrigated from the hill streams. Here the staple crop is *sālī*, or transplanted *āhu* (*khurma*), which is reaped in November and yields a much larger out-turn than the same rice when sown broadcast. The soil of the District varies from pure sand to a stiff clay which is useless for any kind of crop. The most fertile variety is a deep soft loam, which is found in the lowest part of the rice basins. The crops depend, however, more on the water-supply than upon the intrinsic fertility of the soil, and in the central and submontane tract the supply of water is generally adequate. The chief danger to which agriculture is exposed is from floods, which have been especially severe since the drainage channels silted up at the time of the earthquake of 1897. Steps have, however, been taken by both Government and the villagers to re-excavate these channels.

The main agricultural statistics of the District are shown in the table on the next page, in square miles.

The staple food-crop is rice, which in 1903-4 covered 718 square

miles, or 76 per cent. of the total cropped area. Rather more than half of the rice crop was *sālī*, 31 per cent. was *āhu*, and 20 per cent. *baō*. Other important crops are mustard (95 square miles), pulse (35), and sugar-cane. Mustard and pulse are usually grown along the banks of the Brahmaputra, on land afterwards occupied by summer rice.

Subdivision.	Area shown in revenue accounts.			Forest area.
	Settled.	Unsettled.	Cultivated.	
Barpetā . . .	199	1,075	159	...
Gauhati . . .	825	1,759	639	149
Total	1,024	2,834	798	149

When Gauhati was the head-quarters of the Commissioner of Assam, a considerable number of tea gardens were opened in the neighbourhood of the town. In many cases, however, the sites were badly chosen, and the tea was planted on steep and rocky hill-sides, where the rain washed all the fertility from the soil. The seed employed was inferior, the rainfall insufficient, and a large proportion of the gardens proved to be unable to compete with the more prosperous estates of Upper Assam. The result was that the area under tea fell from 6,302 acres in 1882 to 3,659 in 1904. In the latter year 19 gardens yielded 735,000 lb. of manufactured tea, and gave employment to 7 Europeans and 2,416 natives, most of whom had been brought from other parts of India.

The cultivation of jute on a commercial scale has recently been introduced, but the industry is still in its infancy; and, apart from this, nothing has been done to develop the staples of the District, or to break up the large area of unsettled waste land. On the contrary, the area settled at full rates decreased by 12 per cent. between 1891 and 1901, owing to the decline in population and the injury done by the earthquake. Since 1901 there has, however, been a satisfactory extension of cultivation. Agricultural loans were first made in 1902, and during the next three years about Rs. 49,000 was advanced.

The Assamese are utterly indifferent to all the laws of breeding and to the comfort of their animals, and the native cattle are in consequence poor undeveloped creatures. The indigenous buffaloes are, however, larger and stronger than those of Bengal. The ponies brought down from the hills by the Bhotiās are sturdy little animals, and the Bhutān cattle also are a fine breed, but cannot be obtained in large numbers.

The only irrigation works in the District are the small channels dug by the Kāchāri villagers in the submontane tracts, to bring the water of the hill streams to their fields. Some channels, though only a few feet wide, are several miles long, and are capable of irrigating 3,000 or

4,000 acres. They are constructed by the combined labour of the villagers without any intervention on the part of Government. Embankments for flood protection and drainage channels are, however, more necessary than irrigation works.

There were 30 forest Reserves in Kāmrūp in 1903-4, with a total area of 149 square miles. The principal Reserves are those at Pantan and Barduār (59 square miles), which are situated on the banks of the Kulsi river about 30 miles west of Gauhāti; and many of the other forests are small patches, only one or two square miles in area. By far the most important timber tree in Kāmrūp is *sāl* (*Shorea robusta*); but *tita sapa* (*Michelia Champaca*), *ajhar* (*Lagerstroemia Flos Reginae*), *sam* (*Artocarpus Chaplasha*), and *gunserai* (*Cinnamomum glanduliferum*) are also found. The area of 'unclassed' forests was 2,294 square miles, and, though only a small portion is actually covered with timber, the out-turn from these forests is larger than from the Reserves. There is a small plantation of teak and rubber-trees on the Kulsi near the Barduār forest.

No minerals are worked in Kāmrūp, but deposits of lime are said to exist at the foot of the Bhutān hills.

Manufactures, apart from tea, are unimportant. In each house there is a rough loom, on which the women of the family weave silk and cotton cloths. The silk cloths, which are usually made from the thread of the *eri* worm (*Attacus ricini*), are often sold; the cotton cloth is reserved for home use. Gold filigree-work is made at Barpetā; but, though there are a number of jewellers in the District, articles are made only to order. Brass and bell-metal utensils, iron hoes and choppers, and rough pottery are also manufactured, though not in large quantities. Canoes are hollowed out of the trunks of large trees, the people of Barpetā being specially proficient in the art. Mustard oil is prepared in the ordinary country mill; and at Gauhāti there are two steam-mills, where flour is ground, cotton ginned, and oil expressed.

The general trade of the District is almost entirely in the hands of Mārwaris from Rājputāna; but there are a certain number of Muhammadan shopkeepers, and at Barpetā the Assamese, whose wits have been unusually sharpened by their contest with nature in that inhospitable spot, are as keen traders as the Mārwaris themselves. The principal exports are mustard seed, tea, cotton, lac, timber, and silk cloths. The articles received in exchange are rice, cotton yarn and piece-goods, grain and pulse, kerosene and other oils, hardware, and salt. The chief centres of trade are GAUHĀTĪ, BARPETĀ, SOĀLKUCHĪ, PALĀSBĀRĪ, RANGĪĀ, NALBĀRĪ, Baramā, and Tāmulpur, while there are permanent shops at all the *tahsil* head-quarters. Most of the internal trade is, however, transacted at the markets, of which a large

number are held in different parts of the District. In the interior, as well as at Gauhāti, the principal shopkeepers are Mārwaris, who sell piece-goods, salt, grain, and oil, and not infrequently opium, and buy silk cloths, rice, and mustard seed, for which they often make advances before the crop is cut. The bulk of the trade is with Bengal, and is carried by steamer, though when the rivers rise in the rains country boats penetrate into the interior. The only foreign trade is with Bhūtān, whose subjects come down through the DEWĀNGIRI, SUBANKHĀTĀ, and Kakilābāri Duārs to fairs held at Darrangā and Subankhātā, and starting from these centres travel about the country. The principal imports from Bhūtān are rubber, ponies, and blankets; the exports are cotton and silk cloths.

The Assam-Bengal Railway runs for 33 miles through the District to the Nowgong boundary, connecting Gauhāti with Dibrugarh, and with Chittagong via the North Cāchār hills. Through railway communication to Calcutta will be provided by a line now under construction, which will run from a point just opposite Gauhāti to Golakganj on the Dhubri extension of the Eastern Bengal State Railway. A daily service of passenger steamers and large cargo boats, owned by the India General Steam Navigation Company and the Rivers Steam Navigation Company, ply on the Brahmaputra, calling at Gauhāti, Soālkuchi, Palāsbari, and Kholābānda. During the rains country boats come from Bengal, and proceed up the various rivers into the interior. Two trunk roads pass through the District, along the north and south banks of the river. In 1903-4 there were 16 miles of metalled and 160 miles of unmetalled roads maintained from Provincial funds, and 371 miles of unmetalled roads under the local boards. Generally speaking, Kāmrup is well supplied with means of communication. A steam ferry crosses the Brahmaputra at Gauhāti.

As in other parts of Assam, famine is unknown in Kāmrup; but in 1901 the rice crop was the poorest that had been reaped for many years, and there was local scarcity which necessitated some assistance from Government.

For general administrative purposes, the District is divided into two subdivisions: GAUHĀTĪ, under the immediate charge of the Deputy-Commissioner; and BARPETĀ, usually entrusted to a native magistrate. The sanctioned District staff **Administration.** includes five Assistant Magistrates, a Forest officer, and an Engineer who is also in charge of the Khāsi and Jaintiā Hills, and whose headquarters are at Shillong.

The Deputy-Commissioner has the powers of a Sub-Judge, and certain of the Assistant Magistrates exercise jurisdiction as Munsifs. Appeals, both civil and criminal, lie to the District and Sessions Judge of the Assam Valley, whose headquarters are at Gauhāti, while the

High Court at Calcutta is the chief appellate authority. The Assamese are a quiet and peaceful people, and there is not much serious crime.

The land revenue system does not differ materially from that in force in Assam proper, described in the article on ASSAM. The settlement is *ryotwāri*, being made direct with the actual cultivators of the soil, and is liable to periodical revision. The District contains a large area of waste land, much of which is fit for permanent cultivation; and the settled area in 1903-4 was only 27 per cent. of the total area, including rivers, swamps, and hills. Mustard and summer rice are seldom grown on the same land for more than three years in succession, and the villagers are allowed to resign their holdings and take up new plots of land on giving notice to the revenue authorities. In 1903-4, 31,000 acres were resigned and 47,000 acres of new land taken up. Fresh leases are issued every year for this shifting cultivation, and a large staff of *mandals* is maintained to measure new land, test applications for relinquishment, and keep the record up to date. Kāmrūp, like the rest of Assam proper, was last settled in 1893, and the average assessment per settled acre assessed at full rates in 1903-4 was Rs. 2-7-2 (maximum Rs. 4-2-0, minimum Rs. 1-11-0). The District is now being resettled after a detailed examination, in which the different classes of land have been more carefully discriminated. In recent years the people have suffered severely from exceptional unhealthiness and from the earthquake of 1897, which altered the levels of the country, causing obstructions to drainage and deposits of sand. An abatement of Rs. 60,000 has been made in the land revenue of the tracts most seriously affected. A special feature of the District is the large number of estates held revenue free (*lākhirāj*) or at half-rates (*nisfkhirāj*). These cover respectively an area of 53 and 229 square miles, and represent grants made by the Ahom Rājās, usually to priests or temples.

The following table shows collections of land revenue and total revenue in recent years, in thousands of rupees:—

	1880-1	1890-1	1900-1	1903-4
Land revenue . . .	9,12	9,52	11,92	12,30
Total revenue . . .	13,25*	14,90	17,38	18,56

* Exclusive of forest receipts

Outside the municipalities of Gauhati and Barpetā, the local affairs of each subdivision are managed by a board, presided over by the Deputy-Commissioner and the Subdivisional Officer respectively. The expenditure of these boards in 1903-4 amounted to about Rs. 1,43,000, nearly two-fifths of which was devoted to public works.

For the purposes of the prevention and detection of crime, the District

is divided into 17 investigating centres, and the civil police force consisted in 1904 of 46 officers and 282 men. There are no rural police, their duties being discharged by the village headmen. During the winter 2 officers and 31 men of the Gāro Hills military police battalion are stationed in Kām̐rūp, to hold the two outposts of Subankhātā and Darrangā. A District jail is maintained at Gauhāti, and a magistrate's lock-up at Barpetā.

As regards education, Kām̐rūp is fairly representative of Assam. The number of pupils under instruction in 1880-1, 1890-1, 1900-1, and 1903-4 was 6,261, 10,437, 12,346, and 12,951 respectively. Education has made considerable progress during the past thirty years, and nearly three scholars were under instruction in 1903-4 for every one in 1874-5. At the Census of 1901, 3.5 per cent. of the population (6.8 males and 0.2 females) were returned as literate. There were 285 primary, 15 secondary, and 5 special schools in 1903-4. The number of female scholars was 431. The enormous majority of the pupils under instruction are only in primary classes, and the number of girls who have advanced beyond that stage is extremely small. Of the male population of school-going age, 25 per cent. were in the primary stage of instruction, and of the female population of the same age less than one per cent. Among Muhammadans the percentage of the scholars of each sex to the male and female population of school-going age was 27 and 1 respectively. An Arts college is maintained by Government at Gauhāti. The total expenditure on education in 1903-4 was Rs. 1,17,000, of which Rs. 21,000 was derived from fees. About 29 per cent. of the direct expenditure was devoted to primary schools.

The District possesses 2 hospitals and 8 dispensaries, with accommodation for 33 in-patients. In 1904 the number of cases treated was 64,000, of whom 600 were in-patients, and 1,100 operations were performed. The expenditure was Rs. 16,000, the greater part of which was met from Local and municipal funds.

In 1903-4, 39 per 1,000 of the population were successfully vaccinated, which was considerably below the proportion for the Province as a whole. Vaccination is compulsory only in Gauhāti town.

[Sir W. W. Hunter, *A Statistical Account of Assam*, vol. i (1879); E. A. Gait, 'The Koch Kings of Kāmarūpa,' *Journal of the Asiatic Society of Bengal*, vol. lxii, p. 4; H. C. Barnes, *Assessment Reports, Bajālī, Bijni, Barbhag, Baska, Patidurang, Ramdia, and South Bank groups* (1905); B. C. Allen, *District Gazetteer of Kām̐rūp* (1905).]

Kāmta-Rajaulā.—One of the CHAUBE JĀGĪRS in Central India, under the Political Agent in Baghelkhand, with an area of 13 square miles, and a population (1901) of 1,232. The chief is a Kāyasth by caste, the first grantee, Rao Gopāl Lāl, having been the family *vakīl*

of the Chaube family of Kālinjar. The grant was made in 1812, when the Chaube family received their shares. A *sanad* of adoption was granted in 1862. The present holder is Rao Rām Prasād, who succeeded in 1892. The *jāgīr* consists of 3 villages. Of the total area, 899 acres are cultivated, 126 being irrigable. The revenue is Rs. 2,500 a year. The chief place is Rajaulā, situated in 25° 11' N. and 80° 51' E., 8 miles south of Karwī station on the Jhānsi-Mānikpur section of the Great Indian Peninsula Railway. Population (1901), 211.

Kāmthi.—Town and cantonment in Nāgpur District, Central Provinces. See KAMPTÉE.

Kamudi.—Town in the Mudukulattūr *tahsil* of the Rāmnād estate, Madura District, Madras, situated in 9° 24' N. and 78° 23' E. The population (1901) is 6,854, of whom 1,000 are Musalmāns. It contains a large Siva temple, which has been the subject of a famous law-suit, the Shānāns, a caste of toddy-drawers and merchants, claiming the right to enter within its precincts and the majority of the rest of the Hindus opposing their claim. The town participated in the riots which were caused in 1899 by this and other pretensions of the Shānāns, and a small force of punitive police is now quartered on it. Brass and bell-metal vessels are manufactured here.

Kanaigiri.—*Tāluk* and town in Nellore District, Madras. See KANIGIRI.

Kanara, North.—District in the Southern Division of Bombay, lying between 13° 53' and 15° 32' N. and 74° 4' and 75° 5' E., with an area of 3,945 square miles. It is bounded on the north by Belgaum District; on the east by Dhārwar District and the State of Mysore; on the south by South Kanara in Madras; on the west for about 76 miles by the Arabian Sea; and on the north-west by the territory of Goa. The District is not to be confounded with the District of South Kanara in Madras. North Kanara is the most southerly of the coast Districts of the Bombay Presidency.

The Western Ghāts, varying in height from 2,500 to 3,000 feet, run through the District from north to south, dividing it into two parts: namely, the uplands or Bālāghāt (area, 2,639 square miles), and the lowlands or Payan-ghāt (area, 1,306 square miles). The coast-line is broken only by the Kārwar headland in the north, and by the estuaries of four rivers and the mouths of many smaller streams, through which the salt water finds an entrance into numerous lagoons winding several miles inland. The shore, though generally sandy, is in some parts rocky. Fringing its margin, and behind the banks of the brushwood-bordered lagoons, rise groves of coco-nut palms; and inland from this line of palms stretches a narrow strip of level rice land. The whole

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aspects.**

breadth of the lowlands, never more than 15 miles, is in some places not more than 5 miles. From this narrow belt rise a few smooth flat-topped hills, from 200 to 300 feet high; and at places it is crossed by lofty, rugged, densely-wooded spurs, which, starting from the main range of the Western Ghāts, maintain almost to the coast a height of not less than 1,000 feet. Among these hills lie well-tilled valleys of garden and rice land. The plateau of the Bālāghāt is irregular, varying from 1,500 to 2,000 feet in height. In some parts the country rises into well-wooded knolls, in others it is studded by small, isolated, steep hills. Except on the bank of streams and in the more open glades, the whole is one broad waste of woodland and forest. The open spaces are dotted over with hamlets or parcelled out into rice clearings.

Both on the coast, where the green curtain of the forest forms a pleasing background to the long stretches of white sand, on which the rollers break beneath tall palms or dense patches of casuarina, and above the *ghāts* in the vistas of giant hills covered with evergreen jungle, the scenery is of rare beauty. Owing to the absence of railway communication the greater part of the District is seldom visited, except by officials or sportsmen; but the traveller who strays into these unfrequented paths will find surroundings that compare favourably in picturesqueness with any of nature's handiwork.

Stretching across the watershed of the Western Ghāts, North Kanara contains two sets of rivers—one flowing west to the Arabian Sea, the other east towards the Bay of Bengal. Of the eastern streams, the Varadā, a tributary of the Tungabhadra, alone calls for mention. Of those that flow westwards, four are of some importance—the Kālīnadi in the north, the Gangāvali and Tadri in the centre, and the Sharāvati in the south. The last of these, plunging over a cliff 825 feet in height, about 35 miles east of Honāvar, forms the famous GERSOPPA FALLS. Along the coast the quality of the water is good, and the supply throughout the year abundant.

The prevailing rocks are granite and trap, the former largely predominating. At the base of the granite hills a laterite formation is common. Along the coast from Kārwar to Honāvār the surface rock is almost entirely hard laterite, a stone admirably adapted for building purposes.

The humid climate and the high and equable temperature of North Kanara account for the predominance of heavy forest and the moisture-loving types of tropical vegetation. Teak prevails in loose lighter-coloured soils. Bamboos of several valuable kinds grow over the whole of the District. The chief liquor-yielding tree is the coco-nut, which is luxuriant in Kārwar, Kumta, Ankola, and Honāvar. Liquor is also manufactured from the *baini* (*Caryota urens*), which grows

profusely in the Ghāt forests. A detailed list of important trees, shrubs, and common herbs is given in Sir James Campbell's *Bombay Gazetteer*, vol xv, part i.

Kanara is almost the only part of the Bombay Presidency abounding in wild animals. Within the last thirty years elephants have been shot in the District, but they are now extinct. Tigers are numerous, though they have decreased considerably in recent years. Leopards are found in large numbers, and occasionally the black variety. In the western portion of the above-ghāt division, bison are common. Black bear, *sāmbār*, the ribbed-face and mouse deer are frequently met with ; and at times the game are much harried by packs of wild dogs who pursue the deer relentlessly till they succumb from exhaustion. In the smaller forests *chital* (*Cervus axis*) are not uncommon. The absence of legal restriction on the number of deer shot has, however, led to such a reduction in their numbers that rules are now being brought into force to save them from extinction. Twenty years ago a herd of eighty *chital* was not unknown ; it would be difficult nowadays to meet with eight together. Among game-birds are the peafowl, jungle-fowl, spur-fowl, partridge, snipe, quail, duck, widgeon, teal, the green and the imperial pigeon. Red squirrels are frequently seen. Snakes are numerous, including the hamadryad or king cobra, and the python.

The climate of different parts of Kanara varies greatly in salubrity. The coast portion, though moist, is healthy ; but the forest tracts, especially the upland forests, are always malarious and at intervals are visited by especially fatal outbreaks. The most unhealthy time in the forests is the first two months of the rains and the four cold-season months. The valleys of the Kālinadi and of its feeders are tracts where fever has a specially bad name. In December, January, and February the uplands at night and early morning are often wrapped in mist. From May 20 the south-west wind freshens and blows all day, and throughout the hot season the greater portion of the District is rendered agreeable by the prevalence of cool breezes. The temperature falls to 59° in November and rises to 91° in May. In March and April severe thunderstorms serve to cool the atmosphere. The highest annual rainfall is in Bhatkal, 156 inches, while Mundgod records only 46. Of the two divisions of the District, the lowland or coast tract has a heavier rainfall than the upland. The annual rainfall at Kārwar averages 119 inches.

In the low-lying lands near the coast heavy rainfall and a stormy sea sometimes cause floods which damage the crops. In 1831 and again in 1848, owing to the tempestuous weather, the Honāvar coast lands were flooded with salt water and the crops destroyed.

In the third century B.C. Asoka sent missionaries to Banavāsi in

Kanara. From numerous inscriptions the country appears to have been controlled successively by the Kadambas of Banavāsi, the Rattas, the Western Chālukyas, and the Yādavas. It was for long a stronghold of the Jain religion. In **History.** the sixteenth century, when the Portuguese established themselves upon the coast, Kanara was subject to the Vijayanagar kings. It is said to have been extremely rich and prosperous, and for a long period firmly withstood the efforts of the Muhammadan Sultāns of the Deccan to extend their conquests to the south. Eventually, after the crushing defeat at Tālikotā (1565) and the sack of the capital city of Vijayanagar, the local chiefs of Kanara assumed independence. The Musalmāns then attacked the Portuguese settlements on the coast, but were unable to subdue them. The power of Bijāpur, however, was generally established over Kanara, and continued until the Marāthās obtained an ascendancy about 1675; but with the advance of Aurangzeb the country passed under the Mughals after the fall of Bijāpur in 1686, and the chiefs of Sonda and Bednur tendered their submission and tributes. Some time subsequent to 1700 the Marāthās again held Kanara. In 1763 Haidar Alī captured Bednur and obtained an immense booty. Sonda and the sea-coast were also subdued by him, and this brought Haidar into collision with the Marāthās; but he was able to maintain his conquests, and even to extend them as far north as the Kistna. War breaking out with the British, Tipū lost Honāvar in 1783. After the defeat and death of Tipū at Seringapatam, Sonda was annexed by the British in 1799. It included the Kanara country above the *ghāts*, which had been so desolated by war and pillage that there was little to govern except trees and wild beasts. This, with the coast tract taken from Haidar, was attached to the Madras Presidency in 1799, and placed in charge of Munro. It continued to form part of Madras until 1861. In that year, owing to its relations with Bombay and to the fact that the forests supplied the Bombay dockyard with timber for ship-building, North Kanara was transferred to the Presidency of Bombay.

The chief buildings of interest in the District are the Jain temples of Banavāsi, Gersoppa, and Bhatkal. The temple at Banavāsi, which is attributed to the legendary Jakhanāchārya, is of considerable dimensions. It is ornamented with sculptured figures and designs, and has a short Dravidian spire. A loose slab in the courtyard bears an inscription of the second century A.D. At Nagarbastikere near the modern Gersoppa several Jain temples mark the site of the old town. They are much damaged by time, but the images representing the twenty-third and twenty-fourth Tīrthankars are still intact. They are finely modelled in black basalt. At Bhatkal fourteen Jain *bastis* are

still preserved, dating from the reign of Channabhaira Devī in the fifteenth century. At the same place are three stone tombs of European merchants who were buried in the year 1637. The numerous Hindu temples at Gokarn are ascribed to the fifteenth century. That of Mahābaleshwar is the most imposing. Many Kanarese inscriptions have been found at Bhatkal, Gersoppa, and Banavāsi. At Ulvi in Supa there are a few Lingāyat caves and the well of the Lingāyat saint Basava.

The Census of 1872 showed a total population of 398,498, and in the next nine years the population increased to 421,932. By 1891 it had further increased to 446,453. The Census of

Population. 1901 recorded a population of 454,490, or 115 persons per square mile, residing in 8 towns and 1,281 villages. The *tāluka* distribution was :—

<i>Tāluka</i>	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Haliyāl	1,057	1	105	35,122	53	+ 13	1,498
" Supa <i>petha</i>		1	132	21,008		- 35	959
Kālwār	281	1	54	58,460	208	+ 10	6,254
Yellāpur	760	...	110	22,814	52	- 2	1,590
" Mundgod <i>petha</i>	77	16,739		+ .06	845
Ankola	375	...	90	39,665	106	+ 7	2,357
Sirsi	490	1	244	53,232	109	- 1	6,341
Kumta	224	2	111	66,040	295	+ 5	7,700
Siddāpur	332	...	197	41,342	125	- 3	3,428
Honāvar	426	1	93	62,402	235	+ 5	5,227
" Bhatkal <i>petha</i>		1	59	37,666		+ 10	1,877
District total	3,945	8	1,281	454,490	115	+ 2	38,076

The chief towns are the municipalities of KĀLWĀR, the head-quarters of the District, KŪMTA, BHATKAL, HONĀVAR, and SIRSI. Owing to the large areas of forest the country above the *ghāts* is very sparsely populated, and in parts the population is decreasing. Much of the labour required to cultivate the upland tracts is therefore drawn from outside, the chief sources being Goa, Sāvantvādi State, and the Coondapoor *tāluk* of South Kanara. The language of the District is Kanarese, which is spoken by 57 per cent. of the total population. On the coast north of Gokarn and in the Supa *petha*, Konkani replaces Kanarese as the common tongue.

Among the Brāhmins of Kanara (72,000) the most important are the Haviks (41,000), who are chiefly engaged in cultivation, being the owners of the areca-nut gardens of Sirsi and Siddāpur *tālukas*. They are reputed to have come originally from Southern India, and to have intermarried with the local cultivating caste of Gaudas. The second

Brāhman caste of importance is the Gaud Sāraswat (25,000), also known as Shenvi, with the two kindred sub-castes of Bardeskar and Kudaldeskar. The Gaud Sāraswats, who are very fair, claim a northern origin, and certainly came from Goa in the early part of the sixteenth century. They commonly eat fish, on which account other Brāhmans usually deny them the full status of their caste. Closely allied to the Gaud Sāraswats, and probably in former times one caste with them, are the Sāraswats (2,000), also known as Kushasthali or Shenvipaiki, many of whom have lately come from South Kanara. Between Sāraswats and Gaud Sāraswats there is chronic enmity. The establishments of the Government offices in the District are largely recruited from the former.

Apart from the Brāhman castes, the special interest of the North Kanara population centres in the primitive classes, such as the Halvakki Vakkals (4,000), Gamvakkals (12,000), Halepaiks (52,000), Mukris (5,000), Kumārpaiks (9,000), and Harakantras (6,000), who have much in common with the population of Malabar and South Kanara, and but little affinity with the rest of the Bombay Presidency. Among these primitive people there exists to the present day an organization by *bālīs* or exogamous divisions strongly suggestive of totems. Thus, in the caste of a *bāli* named after the *sāmbār* deer, the members may not harm the animal, and do not intermarry. Descent is traced through females. With the gradual Brāhmanizing of these castes, such as the recent promotion of the Kumārpaiks to Kshattriya rank, it is to be expected that this organization by *bālīs* may in time disappear. It has survived long enough, however, to throw valuable light on the nature and origin of the Marāthā *devaks* in the Deccan. The Marāthās in North Kanara number 48,000, and are all cultivators, apparently a relic of the former Marāthā dominion. Locally they are collectively described as *Arer* or Aryans. It is to be noted that the Gangāvali river is popularly considered the extreme southern limit of the Aryan race and languages in India. South of this river the dark complexion, coarse features, Dravidian speech, and primitive customs of the people seem to lend much support to the popular view. Muhammadans (29,000) are distributed as follows: Pathāns, 3,000; Saiyids, 2,000; Shaikhs, 19,000. Besides the regular Muhammadan population (descendants of local converts to Islām), generally in poor circumstances, employed chiefly in agriculture and by Government as messengers and police, there are, in Kanara, two special bodies of foreign Muhammadan settlers. Of these, the more important and well-to-do are the Navāyats or seamen, representatives of the colonies of Arab merchants, of whom a remnant still exists along the whole coast-line of the Bombay Presidency, from Gogha southwards. The other foreign Musalmān community is the Sidīs, descendants of African slaves formerly owned by the Portuguese. Although they have intermarried

for several generations with the low-caste population of the District, the Sidīs have not lost their original peculiarities. They still possess the woolly hair and black skin of the pure negro. Some of them have been converted to Christianity, and some have become absorbed in the lower Hindu castes. They are for the most part very poor, and, settled in remote forests, live on the produce of little patches of rude cultivation.

The Christians in the District, who are almost all Roman Catholics, belong to two classes, the first of which consists of a few families from Goa, of Portuguese extraction, though much mixed by intermarriage with the natives of the country; the second are descendants of local converts to Christianity. Christians of the higher class are clerks, the rest principally artisans and labourers. The total number of native Christians in 1901 was 16,126, of whom 15,116 were Roman Catholics. The chief centres of Roman Catholic Christians are Honāvar, Kumta, and Kārwār. During their time of power and friendship with the Vijayanagar kings (1510-70), the Portuguese were probably allowed to make converts. But, as far as the record of treaties remains, it was during the early part of the eighteenth century, after the Mughals had withdrawn and when the Sonda chief in the north and the Bednur chiefs in the south were their close allies, that the Portuguese were most successful in spreading Christianity along the Kanara coast. When in 1784 Tipū succeeded in driving the British out of Kanara, he determined, on both political and religious grounds, to convert the native Christians of Kanara to Islām. After taking a secret census he dispatched troops who arrested 60,000, or, according to other accounts, 30,000 out of the 80,000 Christians found. The churches were dismantled and every trace of the Christian religion disappeared. Except infirm women and children, the prisoners were marched under a strong military escort to Seringapatam, then the capital of Mysore. The men were circumcised, the unmarried girls carried away as concubines, and many of the married women were badly treated. The change of climate from the coast to the Mysore uplands, harsh treatment, and the unhealthiness of some of the places to which they were sent, so broke the health of the converts that within a year 10,000 are said to have perished. A few Protestants are found in the towns of Kārwār and Honāvar. The only mission in the District is the Basel German Mission, with its head-quarters at Honāvar. It was established in 1845 and supports five schools.

The cultivated portions of the lowlands are either sandy plains lying along the shore and the banks of rivers, or narrow well-watered valleys, which are for the most part planted with rice, coconut groves, and areca-nut gardens. In the uplands the soil is generally a stiff clay, retentive of moisture. Owing to the

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want of inhabitants, and also to the malarious climate, many fertile and well-irrigated valleys lie waste and covered with forest; and difficulty is experienced in finding a sufficiency of labour for the lands already under cultivation.

The District is entirely *ryotwāri*. The chief statistics of cultivation in 1903-4 are shown below, in square miles:—

<i>Tāluka.</i>	Total.	Cultivated.	Irrigated.	Cultivable waste.	Forest
Haliyāl . .	1,056	107	5	22	914
Kārwār . .	281	50	3	14	215
Yellāpur . .	760	71	2	111	563
Ankola . .	375	42	4	15	312
Sirsi . .	491	85	...	13	380
Kūmta . .	224	55	4	16	148
Siddāpur . .	332	46	...	6	264
Honāvar . .	426	72	12	22	325
Total	* 3,945	528	30	219	3,121

* These areas are based on the latest information.

Rice, of which there are many varieties, is the staple crop, the area in 1903-4 being 297 square miles. *Jowār*, chiefly grown in the Haliyāl *tāluka*, occupied one square mile. *Rāgi*, occupying 8 square miles, is grown in the hills for the food of the poorer classes. Pulses occupied 10 square miles, the chief being *mūg*, *kulith*, and *udid*, mostly grown in the coast *tālukas*. Sugar-cane and safflower are also grown to a considerable extent; and coco-nuts, areca-nuts, the lesser cardamoms (*Elettaria Cardamomum*), and pepper are produced in gardens in large quantities for home consumption and for export. The cultivation of coffee has been tried but proved unprofitable. Rice and garden lands are irrigated, the water being obtained from perennial streams. Near villages, especially on the coast, there are groves and avenues of Alexandrian laurel, which attains a large size. East Indian arrow-root grows wild and is also cultivated in some parts. The coco-nut palm is common along the coast, and is the chief liquor-yielding tree in the District. The palms, grown solely for their nuts, are calculated to yield, on good coast garden land, a net yearly profit of about Rs. 50 per acre. The areca-nut gardens, which are situated in the upland valleys, are surrounded by strong fences, within which are planted rows of coco-nut, jack, and mango trees. The *pān* or betel-leaf vine (*Piper Betle*) is extensively grown; also the areca palm. The upland gardens further contain pepper, cardamoms, ginger, plantains; and sometimes pummelo, orange, lime, and iron-wood trees (*nāg-chāmpa*) are found in these higher tracts. Of vegetables, the *bhendi* is largely grown on the coast; and the egg-plant, the water-melon, and various pumpkin gourds and cucumbers are common.

Formerly, in the more open parts of the forest, nomadic cultivation by brushwood burning (*kumri*) was carried on, principally by tribes of Marāthā extraction. The chief difficulty experienced in regard to cultivation in North Kanara since the practice of *kumri* was stopped is that known as the *betta* and *soppu* question. *Betta* is forest land assigned to the adjacent garden cultivation for the provision of *soppu* or leaf manure, which is indispensable in the cultivation of betel, pepper, and cardamoms. The improvident use of *betta* assignments, leading to the destruction of the forest on the land, results in a constant demand for further assignments, which cannot be continuously met unless the forest is to be entirely sacrificed to cultivation. Efforts are being made to come to a final settlement with each garden holder, by the allotment of an area of *betta* that is adequate for his requirements if treated with proper care. The salt marshes on the coast are offered for reclamation on very favourable terms. The cultivators have little recourse to advances under the Land Improvement and Agriculturists' Loans Acts. During the decade ending 1903-4 only 1.5 lakhs was advanced, of which Rs. 27,000 was lent in 1899-1900 and Rs. 67,000 during the last three years of the period.

The cattle are inferior everywhere, especially below the Ghāts. Kārwar, Kūmta, Ankola, and Honāvar contain few domestic animals of local breed. In Kārwar, Kūmta, and Honāvar the Goanese and other Christians rear pigs. Fowls are kept by all classes except Brāhmans.

Of the total area of cultivated land, 30 square miles or 6 per cent. were irrigated in 1903-4. Canals and wells supply about 2 square miles each, tanks 4 square miles, and other sources 22 square miles. The Māvinkop tank supplies 579 acres in the Halīyāl *tāluka*. The other special irrigation works are insignificant. In 1903-4 there were 18,205 wells and 5,534 tanks used for irrigation. Rice and garden crops are watered by runnels brought from streams or rivers. Near the coast in the dry season, dams of earth, stones, and tree branches are thrown across streams and the lands near are watered, the dam being removed at the close of the dry season or left to be swept away by the floods. Some places are watered by canals from ponds. Where the level of the water is below the field, if not very deep, it is raised in a basket hung on ropes and swung through the water by two men. If water has to be raised from a greater depth, the lever and bucket lift is worked by either one or two men; and, if the depth is still greater, it is drawn by the leathern bag worked by a pair of bullocks. When brought to the surface, the water is generally carried to the crop along the hollowed trunk of a palm-tree. The cost of constructing wells varies from Rs. 200 in sandy soil to Rs. 700 in the loam.

The forests of North Kanara are very extensive. Of the total area,

3,262¹ square miles are under forest, of which 548 square miles are 'protected.' The Forest department has charge of the whole area. The forests are divided into three **Forests.** sections: the table-land above the Ghāts, the main range, and the western spurs. The first of these contains splendid forests of teak, black-wood, and other trees 80 to 150 feet high, with fine clean stems 60 to 90 feet high and 5 to 12 feet in girth. The central belt has some of the finest forest of the District, including the magnificent teak tracts along the Kālinadī, Bedti, and Gangāvali rivers. Bamboos of several valuable kinds grow over the whole of the District. The more important trees in the Kānara forests are *khair*, *hedu*, *siras*, *dhaura*, *kāju*, *moha*, *phanas*, *undi*, *sisu*, *abnus*, *jāmbul*, *nandruk*, *bhirand*, *nan*, mango, sandal-wood, tamarind, teak, and *hirda*.

The forest revenue in 1903-4 exceeded 9 lakhs, mainly derived from the value of the timber sold from the dépôts. The cultivators are allowed to gather dry wood for fuel and leaves for manure, and to cut bamboos and brushwood for their huts and cattle-sheds. They are also supplied, free of charge, with such timber as they require for their own use. In former years most of the produce of the Kanara forests went westwards to the sea-coast, finding its chief markets in Bombay and Gujarāt. Of late years the sea trade has fallen off, and the bulk of the timber is now taken eastward to the open country in and beyond Dhārwar.

Iron ore is found in different places in the main range and spurs of the Western Ghāts, and in the island of Basavrājdrug about half a mile off the coast of Haldipur and about 2 miles from the town of Honāvar. The building stone in general use below the Ghāts is iron-clay or laterite, and sometimes granite or granitic schist and clay-slate. Above the Ghāts it is nearly always granite. In the same tract lime is usually made from limestone pebbles dug out of the banks of streams. On the coast, lime is prepared by burning cockle and oyster shells, which are abundant in most of the creeks and rivers, especially in the Kālinadī.

In Kūmta and Banavāsi there are skilled carvers of sandal-wood. A few hundred persons are employed in catch-boiling. In the Ankola *tāluka* are 131 salt-works, ² **Trade and communications.** of which 107 were working in 1903-4 and produced 39,000 maunds of salt. With these exceptions North Kanara has no industries worthy of notice.

The ports of Bhatkal and Honāvar were known in the early centuries of the Christian era, and rose to importance in the fifteenth and sixteenth centuries as centres of the trade in horses from the Persian Gulf. At the present day the chief ports are Kārwar, Kūmta, Ankola,

¹ This figure is taken from the Forest Administration Report for 1903-4.

Honāvar, and Bhatkal, with a total trade in 1903-4 of 61 lakhs: namely, imports 20 lakhs, and exports 41 lakhs. The principal articles of export are rice, timber, coco-nuts, and spices; imports are piece-goods, metals, sugar, and spirits. Cotton from Dhārwar, formerly exported in large quantities from Kūmta, now goes by rail direct to the port of shipment for Europe.

The Southern Mahratta Railway crosses the north-west angle of the District. North Kanara is traversed from north to south by two main roads, one above the Ghāts and one along the coast, and by four main roads at right angles to them which climb the Ghāts and link up the principal coast towns with Belgaum, Dhārwar, and Mysore State. These roads run from Kadra to Belgaum via Supa, from Kārwar to Dhārwar via Yellāpur, from Kūmta to Dhārwar via Sirsi, and from Honāvar to Mysore territory via the Falls. In 1904 the District possessed 340 miles of metalled and 885 of unmetalled roads. All these, except 24 miles of metalled and 585 of unmetalled roads in charge of the local authorities, are maintained by the Public Works department. Avenues of trees are planted along 166 miles. There is steamer communication with Bombay during the fair season only, the steamers of the Bombay Steam Navigation Company calling at Kārwar, Gokarn, Kūmta, Honāvar, and Bhatkal twice a week on their way to and from Mangalore.

North Kanara, with an assured rainfall, is practically exempt from famine. Bad seasons have been known, but the records point to the fact that local scarcity has only occurred owing to an influx of immigrants from the Deccan and Ratnāgiri, or to the depredations of dacoits causing hindrance to the arrival of supplies. The District suffered from these causes in 1806, when men were forced to feed on roots and rice husks, and about 3,000 persons are said to have died of want. In the famine of 1877 relief was necessary on a small scale.

The Collector is usually assisted by a member of the Indian Civil Service and a Deputy-Collector. The District comprises the eight *tālukas* of ANKOLA, HONĀVAR, KĀRWĀR, KŪMTA, SIDDĀPUR, SIRSI, HALIYĀL, and YELLĀPUR. The *mahāls* or *pethas* are Supa attached to Haliyāl, Mundgod to Yellāpur, and Bhatkal to Honāvar *tāluka*. There are three Forest officers.

There is a District and Sessions Judge at Kārwar and four Subordinate Judges. The District Judge acts as a court of appeal from the Subordinate Judges, of whom one decides all original suits without limit in value. Three of the Subordinate Judges exercise the powers of a Small Cause Court. There are twenty-five officers to administer criminal justice in the District. Crime is not of a serious nature below the Ghāts, save an occasional case of forgery; while

above the Ghāts the most common offences are murder and dacoity, usually committed by persons coming from Dhārwar District.

The ancient Hindu revenue system involved theoretically the levy of a sixth part of the gross produce of the land as the share of the State ; but in practice much more than a sixth was taken under various pretexts, either in kind or commuted into money. Probably in late years as much as one-third was exacted ; but when Haidar Ali and Tipū held Kanara, the District was rack-rented to such a ruinous extent that population was diminished by a third, and only half the nominal revenue could be collected. When the District was taken over by the British, it was at first proposed to introduce a permanent settlement ; but, in consideration of its desolate condition, large reductions of revenue were made as a temporary measure, and a permanent settlement postponed. Before many years the opinion was expressed that the Government demand was far too high and unequal in its incidence, and operated against the spread of cultivation ; and after an unsuccessful attempt to fix the revenue upon an average of past receipts, a survey was begun in 1822. This was rather a rough inspection than an accurate survey, but it showed that the area under cultivation was larger than had been supposed. By fixing the assessments at about a third of the produce, the general rate of taxation was lowered ; but the revenue was increased and paid without difficulty. Some progress was made with the survey on this principle, when it was discovered that, as the rate was the same on all lands, good or bad, the worst lands were being abandoned ; and it was then decided to classify the lands according to their quality. In 1848 a minute was recorded by the Collector, demonstrating that it was not possible to assess the District satisfactorily without positive information as to the extent and capabilities of the land and the amount of Government as distinct from private lands, and pointing out that private owners were on all sides extending their boundaries at the expense of Government. Still it was considered that the expense of a survey could not be afforded, and nothing was done until the District was transferred from Madras to Bombay. On its transfer, a survey was introduced, the greatest difficulty being experienced in identifying boundaries of villages and fields. Between 1864 and 1867 a survey settlement was made in 199 villages above the Ghāts, the whole District being completed by 1891. As the settlement spread towards the coast, the landholders showed signs of opposition ; for it was found that the old assessments were far short of even a moderate rent, and that the revenue would be doubled. They refused to pay the new rates, and appealed to the civil courts for redress, carrying their suits to the High Court, which finally upheld the right of Government to revise the assessments in Kanara, and since then opposition

has died out. The survey increased the land revenue by 13 per cent. in Honāvar, by 36 per cent. in Ankola and Kūmta, by 63 per cent. in Yellāpur, and by 115 per cent. in Kārwar. The revision survey of three *tālukas* was completed between 1895-1900, the assessment and area remaining unaffected. The total assessment on Government occupied land is now 10 lakhs. The average assessment per acre is: on 'dry' land 7 annas, on rice land Rs. 2-5, and on garden land Rs. 11-15.

Collections on account of land revenue and revenue from all sources have been, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . . .	7,60	2,96	10,18	13,58
Total revenue . . .	13,60	16,07	16,67	24,63

There are six municipalities in the District—KĀRWĀR, KŪMTA, SIRSĪ, HALIYĀL, HONĀVAR, and BHATKAL—besides two temporary municipalities at GOKARN and ULVI. Outside the limits of these, local affairs are managed by the District board and eight *tāluka* boards. The total income of these bodies in 1903-4 was Rs. 1,18,000, the principal source being the land cess. The expenditure was Rs. 1,38,000, including Rs. 58,000 expended on roads and buildings.

The District Superintendent of police is assisted by 2 inspectors. There are 14 police stations in the District; and the total strength of the police force is 646, including 12 chief constables, 138 head constables, and 496 constables. The District jail at Kārwar has accommodation for 252 prisoners. In addition, there are 10 subsidiary jails and one lock-up in the District, with accommodation for 180 prisoners. The daily average number of prisoners in 1904 was 189, of whom one was a female.

Compared with other Districts of the Presidency, Kanara stands fifth in point of literacy. In 1901, 8.4 per cent. of the population (15 males and 1.1 females) could read and write. Education has spread widely of late years. In 1865-6 there were only 16 schools, attended by 929 pupils. By 1880-1 the number of pupils had increased to 6,511, and by 1890-1 to 12,214. In 1903-4 there were 208 public and 26 private institutions, attended by 9,689 male and 2,062 female pupils. The public institutions include one high school, 10 middle, and 197 primary schools. Of these one is maintained by Government, 147 are managed by local boards, and 37 by municipalities, 19 are aided and 4 unaided. The total expenditure in 1903-4 was Rs. 82,500, of which Rs. 16,000 was derived from fees, and Rs. 17,000 from Local funds. Of the total, 66 per cent. was devoted to primary education.

There is a hospital at Kārwar, and 12 dispensaries, including a railway medical institution, are situated in the District, with accommodation for 85 in-patients. In these institutions 50,500 patients were treated in 1904, of whom 749 were in-patients, and 941 operations were performed. The total expenditure was Rs. 22,800, of which Rs. 10,060 was met from municipal and Local funds.

The number of persons successfully vaccinated in 1903-4 was 11,850, representing a proportion of 26 per 1,000, which slightly exceeds the average for the Presidency.

[Sir J. M. Campbell, *Gazetteer of the Bombay Presidency*, vol. xv (1883); *Selections from the Records of the Bombay Government*, No. CLXIII (1883).]

Kanara, South.—The more northerly of the two Districts on the west coast of the Madras Presidency, lying between $12^{\circ} 7'$ and $13^{\circ} 59'$ N. and $74^{\circ} 34'$ and $75^{\circ} 45'$ E., with an area of 4,021 square miles.

The vernacular name *Kannada* ('the black country') really refers to the black soil of the Kanarese-speaking country in the Southern Deccan. Though a historical misnomer as applied to the western seaboard, it yet marks its long subjection to the Kanarese princes who held sway over the Western Ghāts. The District is bounded on the north by the Bombay Presidency; on the east by Mysore and Coorg; on the south by Coorg and Malabar; and on the west by the Arabian Sea. The scarp or watershed of the WESTERN GHĀTS forms a natural frontier on the east. Approaching in the extreme north within 6

**Physical
aspects.**

miles of the sea, the main line of this range soon swerves abruptly eastward round the Kollūr valley. Through this passes a road leading to the Honnār Maganc, a small tract above the Ghāts belonging to South Kanara, but separated from it by Mysore territory. South of the valley rises the prominent sugar-loaf peak of Kodachādri, 4,411 feet; and thence, a precipitous cliff-like barrier with an average elevation of over 2,000 feet, the Ghāts run south-east to the KUDREMUKH, the highest peak in the District, 6,215 feet above sea-level. From this point they sweep east and south round the Uppinangadi *tāluk* to join the broken ranges of the Coorg and Malabar hills on the southern boundary of the District. South of the Kudremukh their character entirely changes. To the north few passes or prominent heights break the clearly defined watershed. On the south, deep valleys pierce the main line, flanked by massive heights such as Bal-lālrāyandurga (4,940 feet) and SUBRAHMANYA hill (5,626), while a profusion of forest-clad spurs and parallel ranges makes the scenery as varied and picturesque as any in the Presidency. West of the Ghāts a broken laterite plateau slopes gradually towards the sea. The general aspect of the District has been well described as a flatness uniform

but infinitely diversified. Much of the level surface is bare and treeless, and strewn with denuded granite boulders; but numerous miniature hill ranges, well wooded save where stripped for firewood near the coast, and bold isolated crags rising abruptly from the plain, prevent monotony.

Local tradition states that South Kanara was part of the realm wrested by the mythic Parasu Rāma from the sea, and modern geology seems to confirm the view that it is an ancient sea-bed. Water is at any rate the element to which the District owes its distinctive characteristics. The monsoons have furrowed innumerable valleys in the laterite downs, and fertilized them with rich soil washed down by the streams. Valley opens upon valley in picturesque and diversified similarity, all converging at last into the main valleys through which the larger rivers of the District run. Along the backwater which these rivers form at the coast are found large level stretches of fertile rice and garden land. From the sea, indeed, the coast-line presents an endless stretch of coco-nut palms, broken only by some river mouth or fort-crowned promontory where the main level of the plateau runs sheer into the sea.

The rivers of the District, though numerous, are of no great length. Raging torrents in the monsoon, owing to the enormous volume of water they have to carry off, in the hot season they shrink to shallow channels in the centres of their beds. Rapid in their early course, they expand at the coast into shallow tidal lagoons. In the extreme south a number of rivers rising in the Malabar and Coorg hills form a succession of backwaters giving water communication with Malabar. At Kāsaragod the CHANDRAGIRI (Payaswani) flows into the sea past an old fort of the same name. The Netrāvati, with its affluent the Kumāradhārī, and the Gulpūr river, which have a common backwater and outlet at Mangalore, drain the greater part of the Mangalore and Uppinangadi *tāluk*s. The Swarnanadī and the Sitānadī drain most of the Udipi *tāluk* and have a common outlet at the port of Hangārkatta. A picturesque and important backwater studded with fertile islands is formed to the north of Coondapoor town by a number of rivers draining much of the Coondapoor *tāluk*.

The geology of South Kanara has not yet been worked out. It is probable that in the main it consists of Archaean gneisses of the older sub-groups, possibly with representatives of the upper thinner-bedded more varied schists (Mercāra schists) and plutonic igneous rocks where the District touches Mysore and Coorg. Laterite and ordinary coastal alluvium are common in the low-lying parts.

As might be expected from the heavy rainfall (145 inches), the flora of the District is exceedingly varied. The forests are both evergreen and deciduous, and the more important timber trees are mentioned

under Forests below. Of fruit trees, the coco and areca palms and the jack and mango are the most important. There are, however, few good grafted mango-trees, except in Mangalore town. The palmyra palm is found everywhere, and the cashew-tree is very common, especially near the coast. The bamboo grows luxuriantly. Considerable stretches of sandy soil along the coast have been planted with the casuarina. The betel vine, yams of various kinds, and plantains are raised in gardens, and turmeric and chillies as occasional crops. Flowers of numberless kinds grow in profusion, and in the monsoon every hollow and wall sprouts with ferns and creepers.

The fauna is varied. Leopards are found wherever there is cover, and annually destroy large numbers of cattle. The tiger is less common. On the Ghāts bison (*gaur*) and *sāmbār* attract sportsmen, and the black bear is also found, while elephants are fairly numerous in the extensive forests of the Uppinangadi *tāluk*. Deer and monkeys do considerable damage to cultivation near the Ghāts. The jackal is ubiquitous. The handsome Malabar squirrel (*Sciurus indicus*) is common in the forests, and flying foxes have established several flourishing colonies. Among rarer animals are the flying squirrel, lemur, porcupine, and pangolin. Many species of snakes exist, and the python and the hamadryad (*Ophiophagus elaps*) grow to an immense size. Crocodiles and otters are found in the larger streams. There is good fishing in the rivers, mahseer being numerous; but dynamiting, poisoning, and netting by the natives have done much to spoil it.

The climate is characterized by excessive humidity, and is relaxing and debilitating to Europeans and people of sedentary habits. The annual temperature at Mangalore averages 81°. The heat is greatest in the inland parts of the District during the months of March, April, and May. Malarial fever is rife during the hot season and the breaks in the monsoon wherever there is thick jungle. From November to March a chilly land wind blows at night which, though it keeps the temperature low, is unhealthy and reputed especially dangerous to horses.

The annual rainfall averages 145 inches. It is smallest on the coast line, ranging from 127 inches at Hosdrug in the south to 141 inches at Coondapoor in the north. The farther inland one goes the greater is the amount, Kārkala close to the Ghāts having an average of 189 inches. In 1897 the enormous fall of 239 inches was recorded at this station. Of the total amount, more than 80 per cent. is received during the four months from June to September in the south-west monsoon. The rains may be said never to fail, and the District has only once known famine. Floods, however, are rare, as the rivers have usually cut themselves very deep channels.

Little is known of the early history of South Kanara. Inscriptions show that it was included in the kingdom of the Pallavas of Kānchi, the modern Conjeeveram in Chingleput District,

History. whose earliest capital appears to have been Vātāpi or Bādāmi, in the Bijāpur District of Bombay. Its next rulers seem to have been the early Kadamba kings of Banavāsi, the Banaousir of the Greek geographer Ptolemy (second century A.D.), in North Kanara District. About the sixth century they were overthrown by the early Chālukyas, who had established themselves at Bādāmi, the old Pallava capital. In the middle of the eighth century these were expelled by the later Kadamba king Mayūravarma, who is said to have introduced Brāhmans for the first time into the District. His successors seem to have ruled the country as feudatories of the Rāshtrakūtas of Mālkhed in the present Nizām's Dominions, and of the Western Chālukyas of Kalyāni in the same State. About the twelfth century the District was overrun by the Hoysala Ballālas of Dorasamudra, the modern Halebid in Mysore. But there were frequent contests between them and the Yādavas of Deogiri, the modern Daulatābād in the Nizām's Dominions, until in the fourteenth century they were both overthrown by the Delhi Muhammadans, practically securing the independence of the local chiefs. In the first half of the fourteenth century the District passed under the Hindu kings of Vijayanagar. About this time Ibn Batūta, the Muhammadan traveller, passed through it, and has left an interesting, though somewhat exaggerated, description of what he saw. During the next century the Portuguese made their first settlements on the west coast, and Vasco da Gama himself landed in 1498 on one of the islands off Udipi. After the battle of Tālikotā in 1565, in which the last Vijayanagar king was defeated by the united Muhammadans of the Deccan, the local Jain chiefs achieved independence. But in the beginning of the next century almost all of them were subdued by the Lingāyat ruler, Venkatappa Naik, of Ikkeri, now a village in the Shimoga District of Mysore. During the next century and a half the Ikkeri chieftains, who had meanwhile removed their capital to Bednūr, the present Nagar in Mysore, continued masters of the country, though most of the old Jain and Brāhman chiefs seem to have retained local independence.

British connexion with the District begins about 1737, when the factors at TELlicherry, taking advantage of a hostile move by the Bednūr Rājā, obtained commercial advantages, including a monopoly of all pepper and cardamoms in certain tracts. Haidar Ali, the Muhammadan usurper of the Mysore throne, after his conquest of Bednūr in 1763 took Mangalore and made it the base of his naval operations. The place was captured by the English in 1768, but, on Haidar's approach a few months later, was evacuated. On the out-

break of war with Haidar again in 1780, General Mathews, Commander-in-Chief of Bombay, landed opposite Coondapoor and took it. On his subsequent march north to Bednūr, he also took Hosangadi and the Haidargarh fort. Bednūr itself next fell, but the arrival of a large relieving force under Tipū, Haidar's son, forced Mathews to capitulate. Tipū then besieged Mangalore, which surrendered after a protracted struggle. During this war, Tipū, suspecting that the native Christians of the District were secretly aiding the English, deported large numbers of them to Mysore and forcibly converted them to Islām. During the final war with Tipū, which ended in his death at the fall of Seringapatam in 1799, the District suffered severely from the depredations of the Coorgs. By the Partition Treaty of the same year it fell to the British. To the country thus acquired was added in 1834, on the annexation of Coorg, the portion of that province which had been ceded to the Coorg Rājā in 1799. In 1862 the country north of the Coondapoor *tāluk* was transferred to the Bombay Presidency, leaving the District as it now stands to the administration of Madras.

The chief objects of archaeological interest in South Kanara are its Jain remains, which are among the most remarkable in the Presidency. The most noteworthy are found at KĀRKALA, MŪDBIDRI, and YENŪR, in a part of the District long ruled by Jain chiefs, of whom the most important were the Bhairarasa Wodeyars of Kārkala. Under this family, which migrated from above the Ghāts, building in stone is supposed to have been introduced into this part of the west coast. Fergusson states that the architecture of the Jain temples has no resemblance to the Dravidian or other South Indian styles, but finds its nearest affinity in Nepāl and Tibet. There is no doubt that it is largely a reproduction of the architectural forms in wood used in the country from early times. The remains are of three kinds. The first are the *bettas*, or walled enclosures containing colossal statues. There is one of these statues at Kārkala and another at Yenūr. The former is the larger, being 41 feet 5 inches high, and is also the more striking, as it stands on the top of a rocky hill overlooking a picturesque lake. They both have the traditional forms and lineaments of Buddha, but are named after Gomata Rāya, a forgotten and perhaps mythical Jain king. They are monolithic; and the method of their construction, whether they were hewn out of some boulder which stood on their sites, or whether they were sculptured elsewhere and removed to their present positions, is a mystery. A still larger statue, also said to be of Gomata Rāya, at Srāvana Belgola in Mysore is the only other example known. An inscription on the Kārkala statue states that it was erected in A.D. 1431. The second class of Jain remains are the *bastis* or temples. These are found all over the District, the most famous group being

at Müdbidri, where there are eighteen of them. With plain but dignified exteriors, clearly showing their adaptation from styles suited to work in wood, and greatly resembling the architecture common in Nepāl in the reverse slope of the eaves above the veranda, nothing can exceed the richness and variety with which the interior is carved. The largest *basti* at Müdbidri is three-storeyed, resembling somewhat the pagodas of the Farther East, and contains about 1,000 pillars, those of the interior being all carved in the most varied and exuberant manner. The last variety of Jain antiquities are the *stambhas* or pillars. Though not peculiar to Jain architecture, the most graceful examples are found in connexion with the temples of that faith. The finest is at Haleangadi near Kārkala. It is 50 feet from base to capital, the shaft being monolithic and 33 feet in length, and the whole gracefully proportioned and beautifully adorned. BĀRKŪR, once the Jain capital of the region destroyed by Lingāyat fanatics in the seventeenth century, probably excelled the rest of the District in the number and beauty of its buildings; but these are now a mere heap of ruins.

Serpent stones in groves and on platforms round the sacred fig-trees are numerous, bearing witness to the tree and serpent worship imposed by the influence of Jainism and Vaishnavism on the primitive demon and ancestor worship of the country. The Hindu temples are as a rule mean and unpretentious buildings, though many of them, such as that to Krishna at UDIPĪ and the shrines at SUBRAHMANYA, Kollūr. Sankaranārāyana, and Koteshwar, are of great antiquity and sanctity. Forts are numerous, especially along the sea-coast, but of little importance archæologically. That at BEKAL is the largest, and was formerly a stronghold of the Bednūr kings.

South Kanara is divided into the five *tālüks* of Coondapoor, Kāsaragod, Mangalore, Udipi, and Uppinangadi, and includes also the

Population. Amindivi Islands in the Indian Ocean. The headquarters of the *tālüks* (except of Uppinangadi, which is at PUTTŪR) are at the places from which they are respectively named. The headman of the Amindivis lives on the Amini island. Statistics of these areas, according to the Census of 1901, are shown in the table on the next page.

Much of South Kanara is hill and forest; and the density of the population is accordingly little above the average for the Presidency as a whole, fertile and free from famine though the District is. In the Uppinangadi *tālūk*, which lies close under the Ghāts, there are only 147 persons to the square mile. This is, however, on the main road to Mysore and Coorg, and the opportunities for trade thus afforded have caused the population here to increase faster than in the District as a whole.

The population of South Kanara in 1871 was 918,362; in 1881,

959,514; in 1891, 1,056,081; and in 1901, 1,134,713. It will be seen that the growth, though steady, is not remarkable. In the decade ending 1901 the rate of increase was about equal to the average for the Presidency, and during the last thirty years it has amounted to 24 per cent. There is considerable temporary emigration of labourers every year to the coffee estates of Coorg and Mysore, the total loss to the District in 1901 on the movement between it and these two areas being 14,000 and 40,000 persons respectively. On the other hand, South Kanara obtains very few immigrants from elsewhere. In 1901 less than 2 persons in every 100 found within it had been born outside. As in the case of Malabar, this is largely due to its geographical isolation, and to the fact that the ways and customs of its people and its agricultural tenures differ much from those of neighbouring areas. The people are fonder of living in their own separate homesteads than in streets, and the District consequently has a smaller urban population than any other except Kurnool and the Nilgiris, and includes only two towns. These are the municipality of MANGALORE (population, 44,108), the District head-quarters, and the town of UDUPI (8,041). Both are growing places. There are few villages of the kind usual on the east coast, the people living in scattered habitations.

Taluk.	Area in square miles	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write
		Towns.	Villages.				
Coondapoor .	619	...	103	131,858	213	+ 0.2	7,748
Udupi .	719	1	157	251,831	350	+ 3.9	15,496
Mangalore .	679	1	243	334,294	492	+ 10.5	22,023
Amindivi Islands	3	...	4	3,608	1,203	- 3.1	38
Uppinangadi .	1,239	...	182	181,842	147	+ 9.9	7,818
Kasaragod .	762	...	114	231,280	304	+ 10.0	13,067
District total	4,021	2	803	1,134,713	282	+ 7.4	66,190

Of the total population in 1901 Hindus numbered 914,163, or 81 per cent.; Musalmāns, 126,853, or 11 per cent.; Christians, 84,103, or 7 per cent.; and Jains, 9,582, or 1 per cent. Musalmāns are proportionately more numerous than in any Districts except Malabar, Madras City, and Kurnool; and most of them are Māppillas, who are described in the article on MALABAR. Excluding the exceptional cases of Madras City and the Nilgiris, Christians form a higher percentage of the people than in any District except Tinnevely. They have increased at the rate of 45 per cent. during the last twenty years. Jains are more numerous than in any other District of Madras.

South Kanara is a polyglot District. Tulu, Malayālam, Kanarese, and Konkani are all largely spoken, being the vernaculars respectively

of 44, 19, 19, and 13 per cent. of the population. Tulu is the language of the centre of the District, and is used more than any other tongue in the Mangalore, Udipi, and Uppinangadi *tālūks*; but in Mangalore a fifth of the people speak Konkani, a dialect of Marāthī, and in Udipi nearly a fourth speak Kanarese. In the Amindīvi Islands and in Kāsaragod, which latter adjoins Malabar, Malayālam is the prevailing vernacular. Most of those who are literate are literate in Kanarese. It is the official language of the District, and its rival, Tulu, has no written character, though it has occasionally been printed in Kanarese type.

The District contains proportionately more Brāhmins than any other in Madras, the caste numbering 110,000, or 12 per cent. of the Hindu population. The Hindus are made up of many elements, and the castes are in need of more careful study than they have yet received. They include 16,000 Telugus (9,000 of whom are Devānga or Sāle weavers); 82,000 members of Malayālam castes (most of whom are found in the Kāsaragod *tālūk*); 140,000 people of Marāthī or Konkani-speaking communities; and 672,000 who talk Kanarese or Tulu. The three largest castes in the District are the Billavas (143,000), the Bants (118,000), and the Holeyas (118,000). The first two of these hardly occur elsewhere. They are respectively the toddy-drawers and the landholders of the community. The Holeyas are nearly all agricultural labourers by occupation.

Except the three Agencies in the north of the Presidency and South Arcot, South Kanara is more exclusively agricultural than any other District. As many as three-fourths of its people live by the land. Toddy-drawers are also proportionately more numerous than usual, though it must be remembered that many toddy-drawers by caste are agriculturists or field-labourers by occupation, while weavers and leather-workers form a smaller percentage of the people than is normally the case.

Out of the 84,103 Christians in the District in 1901, 83,779 were natives, more than 76,000 being Roman Catholics. Tradition avers that St. Thomas the Apostle visited the west coast in the first century. The present Roman Catholic community dates from the conquest of Mangalore by the Portuguese in 1526. Refugees from the Goanese territory driven out by Marāthā incursions, and settlers encouraged by the Bednūr kings, swelled the results of local conversion, so that by Tipū's time the native Christian community was estimated at 80,000 souls. But after the siege of Mangalore in 1784 Tipū deported great numbers of them, estimated at from 30,000 to 60,000, to Seringapatam, seized their property, and destroyed their churches. Many of them perished on the road and others were forcibly converted. On the fall of Seringapatam the survivors returned, and the community

was soon again in a prosperous condition. The jurisdiction of Goa continued until 1837, when part of the community placed themselves under the Carmelite Vicar Apostolic of Verapoli in Travancore. After further vicissitudes the Jesuits took the place of the Carmelites in 1878. Mangalore is now the seat of a Roman Catholic bishopric.

The only Protestant mission is the German Evangelical Mission of Basel, established at Mangalore in 1834. Its converts now number 5,913, mainly drawn from the poorest classes of the people, who find employment in the various industrial enterprises of the mission.

The agricultural methods of South Kanara are conditioned by its climate and geological peculiarities. As already mentioned, the District is a laterite plateau on a granite bed, bounded by the Ghâts, and worn and furrowed into countless valleys

Agriculture.

by the action of the monsoons. Much of the level plateau above the valleys produces nothing but thatching-grass or stunted scrub; but the numerous hollows are the scene of rich and varied cultivation, and the slopes above the fields are well wooded save where denuded to supply the fuel markets of Mangalore and other large towns.

The soil is as a rule a laterite loam, which is especially rich in the lower stretches of the valleys, where the best rice land is found. Large stretches of level ground occur along the coast, where the soil is generally of a sandy character but contains much fertilizing alluvial matter. To the north of the Chandragiri river this land grows excellent rice crops and bears a very heavy rent. South of that stream the soil is thinner and suited only to the commoner kinds of rice; but tobacco and vegetables are grown in considerable quantities, especially by the Māpillas.

Every valley has one or more water channels running through its centre or down either side. The best rice-fields lie as a rule on a level with these channels, which feed them during the whole of the first-crop season by small openings in their embankments that can be shut or opened as needed. After the first crop of rice has been harvested, dams are thrown across these channels at intervals; and by this means the level of the water is maintained, and a second, and even a third, crop of rice can be grown by direct flow from the channel, water being let into the plots as required. Very often a permanent dam is maintained above the cultivation, to divert part of the water down the side channels. In the land immediately above these side channels a second crop of rice is grown by bailing either with *picottahs*, or, when the level admits, with hand-scoops (*kaidambe*) suspended from a cross-bar, or with a basket swung with ropes by two men. These lands are locally termed *majal*. Still higher up the slopes of the valley are other rice-fields, known as *bettu*, cut laboriously in terraces out of the hill-sides. These give only one crop of rice and, except where fed by some small jungle

stream, are entirely dependent on the rainfall; consequently their cultivation is somewhat precarious. The areca gardens are mostly situated in the sheltered nooks of the valleys in the more hilly parts of the District and in the recesses of the lower spurs and offshoots of the Ghāts, where the two essentials of shade and a perennial water-supply occur in combination. The finest coco-nut gardens are found in the sandy level stretches adjoining the coast, especially along the fringes of the numerous backwaters.

A considerable quantity of black gram, horse-gram, and green gram is grown on the level land near the coast as a second crop, and on *majal* lands elsewhere if sufficient moisture is available. Sugar-cane is grown here and there beside the backwaters. Pepper has never recovered from the measures taken by Tipū to suppress its cultivation. In the south of the Kāsaragod *tāluk*, *kumri*, or shifting cultivation, is still carried on in the jungles.

The District is essentially *ryotwāri*, such *ināms* as exist being merely assignments of land revenue. Statistics of the various *tāluk*s for 1903-4 are appended, areas being in square miles :—

<i>Tāluk.</i>	Area shown in accounts	Forests.	Cultivable waste.	Cultivated.
Coondapoor . . .	619	241	35	122
Udipi . . .	719	159	60	134
Mangalore . . .	679	60	122	195
Uppinangadi . . .	1,239	547	91	162
Kāsaragod . . .	762	63	61	377
Total	4,018	1,070	369	990

More than a fourth of the District consists of forest, nearly one-half is hilly and rocky land not available for cultivation, and the area actually cropped is less than a fifth of the total. Rice is by far the most important staple, the area under it (counting twice over that cropped twice) being 760 square miles. The garden area, 82 square miles, consists almost entirely of coco-nut and areca-nut plantations. These three crops practically monopolize the cultivation.

For agricultural purposes the ryots divide the year into three seasons, to correspond with the times of the three rice crops. These are *Kārtika* or *Yenel* (May–October), *Suggi* (October–January), and *Kolake* (January–April). It is doubtful if any District in the Presidency shows such a round of orderly and careful cultivation, and the increased out-turn from any theoretical improvements that might be made would probably be more than counterbalanced by the enhanced cost of cultivation. The choice and rotation of crops, the properties of various soils, the selection of seed and of seed-beds, the number of ploughings, the amount of manure, the distribution of water, the

regulation of all these, and the countless other details of high farming, if based on no book knowledge, have been minutely adapted by centuries of experience and tradition to every variety of holding.

In the jungles which almost everywhere adjoin the cultivation the ryot finds an unfailing supply of manure for his fields, of timber for his agricultural implements, which he fashions at little expense to himself, and of fuel for domestic use. Consequently he has availed himself but little of the Land Improvements Loans Act. Under the name of *kumaki*, holders of *kadim wargs*, or holdings formed before 1866, enjoy these privileges to the exclusion of others within 100 yards of the cultivation. No figures are available to show the extension of tillage. The absence of a survey, the connivence of the village and subordinate revenue officials, and the nature of the country have made encroachments particularly easy; and land has been formally applied for only where the prior right to it has been disputed, or to serve as a nucleus for future encroachment. Cultivation has increased steadily everywhere except immediately under the Ghâts, where the miseries and depopulation caused by the disturbances of the eighteenth century threw out of cultivation large tracts which have never recovered, owing to the prevalence of malaria and the demand for labour elsewhere.

The chief drawback to agriculture in South Kanara is the want of a good indigenous breed of cattle. All the best draught and plough cattle have to be imported from Mysore, and even where well tended they are apt to deteriorate. The ordinary village cattle, owing to exposure to the heavy rains, indiscriminate breeding, bad housing, and a régime of six months' plenty and six months' want, are miserably undersized and weakly. The climate is equally unfavourable to sheep and horses, the number of which is small and kept up only by importation. A fair is held annually at Subrahmanya, to which about 50,000 head of cattle are brought from Mysore to meet local requirements.

The heavy rainfall and the rapid nature of the rivers do not admit of large irrigation reservoirs or permanent dams being formed, and as a result there are no Government irrigation works in the District. But the ryots have themselves most skilfully utilized the springs and streams by countless channels, feeders, and temporary dams. Along the coast, cultivation is largely assisted by shallow ponds scooped at little expense out of the sandy soil, and farther inland reservoirs of a more substantial nature are sometimes constructed at the valley heads. Many areca gardens are so supplied.

South Kanara is essentially a forest District. With the exception of the bare laterite plateaux and downs of the Kāsaragod and Mangalore *tāluks*, and the spots where the hills near the coast have been stripped of their growth for timber, fuel, and manure, the country is everywhere richly wooded. The whole

Forests.

line of the Ghāts with their spurs and offshoots presents an almost unbroken stretch of virgin forest, which finds its richest and most luxuriant development in the recesses of the Uppinangadi *tāluk*, where the most important and largest Reserves are found. The total forest area in the District is 662 square miles, and 408 square miles of 'reserved' land are also controlled by the Forest department. In the early years of British administration the claims of Government to the forests and their prospective importance were alike overlooked; but the rights of the Crown began to be asserted from the year 1839 onwards, and during the last thirty years Reserves have been selected and a system of conservation introduced.

The destructive system of shifting cultivation, locally known as *kumri*, has been prohibited since 1860, except in a few small tracts where it is strictly regulated. Such regulation is a matter of the greatest importance to a District with an annual rainfall averaging over 140 inches, the seasonable distribution of which depends largely on the proper protection of its catchment area.

The most valuable timber trees are teak, poonspar (*Calophyllum elatum*), black-wood (*Dalbergia latifolia*), jack (*Artocarpus integrifolia*) and wild jack (*A. hirsuta*), *ventek* (*Lagerstroemia microcarpa*), *kirālbhog* (*Hoepa parviflora*), *banapu* (*Terminalia tomentosa*), and *marva* (*T. paniculata*). But development must still be said to be in its infancy. In fact, the chief revenue is at present derived from items of minor produce, such as catechu, grazing fees, &c. The main obstacle is the want of good communications; but once this is overcome, whether by a system of light railways or otherwise, the South Kanara forests should be of the greatest value.

A fine clay excellently adapted for pottery is found in several localities, especially along the banks of the Netrāvati, which supplies material for the Mangalore tile-works mentioned below. Gold and garnets are known to occur in one or two places, but the mineral resources of the District are as yet practically unexplored. The ordinary laterite rock, which is easily cut and hardens on exposure, forms the common building material.

The only large manufactures in South Kanara are the results of European enterprise. Tile-making was introduced by the Basel

**Trade and
communications.**

Mission, and this body has now two factories at Mangalore and another at Malpe near Udipi. At Mangalore one other European firm and nine native merchants are engaged in the industry, and elsewhere in the District are two more native factories. The industry employs altogether about 1,000 hands. The Basel Mission has also a large weaving establishment at Mangalore, and some of its employes have started small concerns elsewhere; but otherwise the weaving of the

District is of the ordinary kind. The same may be said with reference to the work of the goldsmiths, blacksmiths, and other artisans. Four European and three native firms are engaged in coffee-curing. In 1903-4 coffee from above the Ghāts to the value of 41 lakhs was exported. Coir yarn is manufactured in considerable quantities in the Amindivi Islands, where it forms a Government monopoly, and along the coast. On the coast, too, a considerable industry exists in fish-curing, which is done with duty-free salt in fourteen Government curing-yards. Most of the product is exported to Colombo, but large quantities are also sent inland. Sandal oil is distilled in the Udipi *tāluk* from sandal-wood brought down from Mysore.

The principal articles of export are coffee, tiles, coco-nut kernels (copra), rice, salted fish, spices, and wood. The tiles are exported to Bombay and to ports in the Presidency. The coffee is brought from Mysore and Coorg to be cured, and is exported chiefly to the United Kingdom and France. The coco-nut kernels go chiefly to Bombay, rice to Malabar and Goa, and salted fish to Colombo. Large quantities of areca-nuts are shipped to Bombay and Kāthiāwār. The wood exported is chiefly sandal brought from Mysore and Coorg. The chief imports are cotton piece-goods, grain, liquor, oil, copra, pulses, spices, sugar, salt, and salted fish, largely to meet local needs, but partly for re-export to Mysore and Coorg. The bulk of the trade is carried on at MANGALORE (the commerce of which is referred to in the separate article upon the place); and Malpe, Hangārkatta, and Gangoli are the most important of the outports. The most prominent by far of the mercantile castes are the Māppillas, who are followed by Telugu traders, such as the Balijās and the Chettis. Konkani Brāhmans, native Christians, and Rājāpuris also take a share. There are twenty weekly markets in the District under the control of the local boards.

The District had recently no railways; but the Azhikal-Mangalore extension of the Madras Railway, opened throughout in 1907, now affords communication with Malabar and the rest of the Presidency. Its construction is estimated to have cost 109 lakhs for a length of 78 miles. A line from Arsikere on the Southern Mahratta Railway to Mangalore has also been projected and surveyed.

The total length of metalled roads is 148 miles and of unmetalled roads 833 miles, all of which are maintained from Local funds. Avenues of trees have been planted along 467 miles. The main lines are the coast road from Kavoy to Shirūr; the roads leading to Mercāra through the Sampaji *ghāt* from Kāsaragod and Mangalore; and those from Mangalore through the Chārmādi *ghāt* to Mudugere *tāluk*, and through Kārkala and the Agumbe *ghāt* to the Koppa *tāluk* in Mysore. Lines running through the Kollūr, Hosangadi, Shirādi, and Bisale

ghāts also afford access to Mysore, and the main routes are fed by numerous cross-roads. The tidal reaches of the rivers and the numerous backwaters furnish a cheap means of internal communication along the coast. In the monsoon communication by sea is entirely closed ; but during the fair season, from the middle of September to the middle of May, steamers of the Bombay Steam Navigation Company call twice weekly at Mangalore and other ports in the District. Mangalore is also a port of call for steamers of the British India Company and other lines. Large numbers of coasting craft carry on a brisk trade.

Owing to the abundant monsoons the District always produces more grain than is sufficient for its requirements. It is practically exempt from famine, and no relief has ever been needed except in the year 1812.

For administrative purposes South Kanara is divided into three subdivisions. Coondapoor, comprising the Coondapoor and Udupi *tālūks*, is usually in charge of a Covenanted Civilian.

Administration. Mangalore, corresponding to the *tālūk* of the same name (but including also the Amindivi Islands), and Puttūr, comprising the Uppinangadi and Kāsaragod *tālūks*, are under Deputy-Collectors recruited in India. A *tahsildār* and a stationary sub-magistrate are posted at the head-quarters of each *tālūk*, and deputy-*tahsildārs* at Kārkala, Bantvāl, Beltangadi, and Hosdrug, besides a sub-magistrate for Mangalore town.

Civil justice is administered by a District Judge and a Subordinate Judge at Mangalore, and by District Munsifs at Mangalore, Kāsaragod, Udupi, Coondapoor, Puttūr, and Kārkala. The Court of Session hears the more important criminal cases, but serious crime is not more than usually common, and there are no professional criminal tribes in the District. Offences under the Abkārī, Salt, and Forest Acts are numerous ; and civil disputes are frequently made the ground of criminal charges, especially in connexion with land and inheritance, the majority of the Hindu castes in the District being governed by the Aliya Santāna law of inheritance, under which a man's heirs are not his own but his sister's sons.

Little is known of the early revenue history of the District. Tradition gives one-sixth of the gross produce, estimated at first in unhusked and latterly in husked rice, as the share demanded by the government prior to the ascendancy of Vijayanagar. About 1336, in the time of Harihara, the first of the kings of that line, the land revenue system was revised. One-half of the gross produce was apportioned to the cultivator, one-quarter to the landlord, one-sixth to the government, and one-twelfth to the gods and to Brāhmans. This arrangement thinly disguised an addition of 50 per cent. to the land revenue ; and the assumed share of the gods and Brāhmans, being collected by the

government, was entirely at its disposal. In 1618 the Ikkeri Rājās of Bednūr imposed an additional assessment of 50 per cent. on all the District except the Mangalore *hobli*, and at a later date imposed a tax on fruit trees. These additions were permanently added to the standard revenue. Other additions were made from time to time, amounting in 1762, when Haidar conquered Kanara, to a further 25 per cent. of the standard revenue, but still not sufficient to affect seriously the prosperity of the District. Haidar cancelled the deductions previously allowed on waste lands and imposed other additions, so that at his death the extras exceeded the standard revenue. The further exactions and oppressions of Tipū were such that much land went out of cultivation, collections showed deficiencies ranging from 10 to 60 per cent., and the District was so impoverished that little land had any saleable value.

Major (afterwards Sir Thomas) Munro, the first Collector of the District, setting aside all merely nominal imposts and assessments on waste lands, imposed on Kanara and Sonda (the present Districts of North and South Kanara) a new settlement in 1799-1800. Some slight reductions were made in the following year. It worked smoothly for some time; then difficulty in the collections and signs of deterioration owing to over-assessment induced the Board of Revenue to order a revision, based on the average collections from each estate since the country came under the British Government. This assessment, introduced in 1819-20, was till recently in force in South Kanara, with the exception of a portion of the Uppinangadi *tāluk* which was subsequently taken over from Coorg. Continued difficulty in realizing the demand, owing to low prices and riotous assemblages of the cultivators, who refused to pay their assessment, led to a Member of the Board of Revenue being deputed in 1831 to inquire into the state of the District. He reported that the disturbances were due to official intrigues, that the assessment was on the whole moderate, though low prices had caused some distress, and that where over-assessment existed it was due entirely to the unequal incidence of the settlement, aggravated by the frauds of the village accountants, who had complete control over the public records. In accordance with his views, some relief was granted in the settlement for 1833-4 to those estates which were over-assessed. The Board did not, however, regard these measures as satisfactory. Further correspondence confirmed the view that any attempt to base a redistribution of the assessment on the accounts then available was doomed to failure, owing to their fallacious nature. The Board therefore expressed the opinion that the only remedy was a settlement based on a correct survey. This proposal involved a consideration of the question whether any pledge had been given for the fixity of the settlement of 1819-20. After further correspondence

between the Collectors, the Board, and the Government, the question was dropped in 1851, the improvement in prices having meanwhile relieved the pressure of assessment on particular estates.

In 1880 the matter was again raised by the Government of India, in connexion with the general revision of settlements in the Presidency; and it was finally determined that the Government was in no way pledged to maintain the assessment unaltered, and that the survey and revision of settlement should be extended to Kanara in due course. A survey was begun in 1889 and settlement operations in October, 1894. A scheme was sanctioned for all the *tālūks* and has now been brought into operation. Under this the average assessment on 'dry' land is R. 0-9-7 per acre (maximum Rs. 2, minimum 2 annas); on 'wet' land Rs. 4-7-11 (maximum Rs. 10, including charge for second crop; minimum 12 annas); and on garden land Rs. 4-13-7 (maximum Rs. 8, minimum Rs. 2). The proposals anticipate an ultimate increase in the assessment of the District of Rs. 9,22,000, or 65 per cent., over the former revenue.

The revenue from land and the total revenue in recent years are given below, in thousands of rupees:—

	1880-1.	1890-1	1900-1.	1903-4.
Land revenue . . .	13.38	14.69	15.26	17.05
Total revenue . . .	17.90	21.63	25.41	27.76

Outside the municipality of Mangalore, local affairs are managed by the District board and the three *tālūk* boards of Coondapoor, Mangalore, and Puttūr, the areas in charge of which correspond with the subdivisions of the same names. Their total expenditure in 1903-4 was Rs. 2,82,000, of which Rs. 1,57,000 was laid out on roads and buildings. The chief source of income is, as usual, the land cess. South Kanara contains none of the Unions which on the east coast control the affairs of many of the smaller towns.

The police are in charge of a District Superintendent, whose headquarters are at Mangalore. The force numbers 10 inspectors and 558 constables, and there are 50 police stations. Village police do not exist.

There is a District jail at Mangalore, and 8 subsidiary jails at the head-quarters of the *tahsildārs* and their deputies have accommodation for 85 males and 35 females.

At the Census of 1901 South Kanara stood eleventh among the Districts of the Presidency in the literacy of its population, 5.8 per cent. (11.1 males and 0.9 females) being able to read and write. Education is most advanced in the Mangalore *tālūk*, and most backward in the hilly inland *tālūk* of Uppinangadi. In 1880-1 the number

of pupils of both sexes under instruction in the District numbered 6,178; in 1890-1, 18,688; in 1900-1, 24,311; and in 1903-4, 27,684. On March 31, 1904, the number of educational institutions of all kinds was 658, of which 502 were classed as public and 156 as private. The public institutions included 474 primary, 23 secondary, and 3 special schools, and 2 colleges. The girls in all of these numbered 4,107, besides 1,566 under instruction in elementary private schools. Six of the public institutions were managed by the Educational department, 85 by local boards, and 7 by the Mangalore municipality, while 278 were aided from public funds, and 126 were unaided but conformed to the rules of the department. Of the male population of school-going age in 1903-4, 21 per cent. were in the primary stage of instruction, and of the female population of the same age 4 per cent. Among Musalmāns, the corresponding percentages were 30 and 6 respectively. Education, especially that of girls, is most advanced in the Christian community. Two schools provide for the education of Panchamas or depressed castes, and are attended by 37 pupils. The two Arts colleges are the St. Aloysius College, a first-grade aided institution, and the second-grade Government College, both at Mangalore. The former was established in 1880 by the Jesuit Fathers. The total expenditure on education in 1903-4 was Rs. 2,22,000, of which Rs. 77,000, or 35 per cent., was derived from fees; and 53 per cent. of the total was devoted to primary education.

The District possesses 8 hospitals and 11 dispensaries, with accommodation for 75 in-patients. In 1903 the number of cases treated was 135,000, including 1,600 in-patients, and 3,200 operations were performed. The expenditure was Rs. 38,000, which was mostly met from Local and municipal funds.

In 1903-4 the number of persons successfully vaccinated was 28,000, or 23 per 1,000 of the population. Vaccination is compulsory only in the Mangalore municipality.

[J. Sturrock and H. A. Stuart, *District Manual* (1894).]

Kanārak.—Temple in Purī District, Bengal. See KONĀRAK.

Kānaud Town.—Head-quarters of the Mohindargarh *nizāmat* and *tahsil*, Patialā State, Punjab, situated in 28° 16' N. and 76° 13' E., 24 miles south of Dāri. Population (1901), 9,984. Kānaud was founded by Malik Mahdūd Khān, a servant of Bābar, and first peopled, it is said, by Brāhmans of the Kanaudia *sāsan* or group, from whom it takes its name. It remained a *pargana* of the *sarkār* of Nārnaul under the Mughal emperors, and about the beginning of the eighteenth century was conquered by the Thākūr of Jaipur, who was in turn expelled by Nawāb Najaf Kuli Khān, the great minister of Shāh Alam. On his death his widow maintained her independence in the fortress, but in 1792 Sindhia's general, De Boigne, sent a force against it under

Perron. Ismail Beg persuaded its mistress to resist, and marched to her relief; but she was killed in the battle which ensued under the walls of Kānaud, and Ismail Beg surrendered to Perron. Kānaud then became the principal stronghold of Appa Khande Rao, Sindhia's feudatory, who held the Rewāri territory, and eventually became a possession of the British, by whom it was granted to the Nawāb of Jhajjar. By the *sanad* of January 4, 1861, the British Government granted *parganas* Kānaud and Kuddhūāna to the Mahārājā of Patiāla, with all rights pertaining thereto, in lieu of 19.4 lakhs. The town has an Anglo-vernacular middle school, a dispensary, and a police station. The fort of Kānaud, known as Mohindargarh, contains the headquarters offices of the Mohindargarh *nizāmat* and *tahsīl*.

Kanauj Tahsīl (*Kannauj*).—South-eastern *tahsīl* of Farrukhābād District, United Provinces, conterminous with the *pargana* of the same name, lying along the Ganges, between 26° 56' and 27° 12' N. and 79° 43' and 80° 1' E., with an area of 181 square miles. Population decreased from 117,229 in 1891 to 114,215 in 1901. There are 206 villages and one town, KANAUI (population, 18,552). The demand for land revenue in 1903-4 was Rs. 1,95,000, and for cesses Rs. 31,000. The density of population, 631 persons per square mile, is above the District average. The *tahsīl* consists of two parts: the uplands or *bāngar*, and the lowlands near the Ganges, or *kachohā*, the former covering the larger area. The Kālī Nadi (East) crosses the *tahsīl* and joins the Ganges. In 1903-4 the area under cultivation was 124 square miles, of which 43 were irrigated. Irrigation is supplied almost entirely from wells, and the tract is liable to suffer in dry seasons. This was the only *tahsīl* in the District which lost in population between 1891 and 1901.

Kanauj Town (*Kannauj*).—Ancient city in Farrukhābād District, United Provinces, situated in 27° 3' N. and 79° 56' E., 2 miles from the grand trunk road and the Cawnpore-Achhnerā Railway, and close to the Kālī Nadi (East). The Ganges once flowed below its walls, but is now some miles away. Population (1901), 18,552. The town finds no mention in the Mahābhārata, but the legend of its foundation is given in the Rāmāyana. Kusinābha, the founder, had a hundred daughters, all but the youngest of whom scorned the hermit, Vāyu. In revenge he cursed them, and their backs became humped, whence the city was called Kānya-kubja, or 'the crooked maiden.' Early in the Christian era Ptolemy refers to Kanauj as *Kanogiza*. The town was included in the Gupta dominions in the fifth century; and when the Gupta empire fell to pieces it became the capital of the Maukharis, one of the petty dynasties which arose in its place. In the sixth century it suffered from war with the White Huns and their ally, the king of Mālwa; but early in the seventh century it was included in

the great empire of Harshavardhana in Northern India. The Chinese pilgrim, Hiuen Tsiang, who visited this monarch and travelled with him from Allahābād to Kanauj, describes the magnificence of his court. Harshavardhana's death was the signal for anarchy, and the detailed history of the following years is unknown. In the latter half of the ninth century a dynasty of Raghuvansi kings reigned from Kanauj, which was also called Mahodayā, over an extensive dominion. One of these kings was defeated in 917 by the king of Gujarāt, but restored by the Chandel king of Mahobā. In 1019 Mahmūd of Ghazni plundered Kanauj, which now came into the power of the Rāthors, the most celebrated of whom was Gobind Chand (1115-55). Nearly 200 years later, in 1194, Muhammad Ghorī defeated Jai Chand, the last of the Rāthor kings, and the great kingdom of Kanauj came to an end. Under the Muhammadans Kanauj became the seat of a governor, but lost its old importance. In the fifteenth century it was included for some years in the Sharki kingdom of Jaunpur; and when Mahmūd, son of Fīroz Tughlak, lost his hold on Delhi, he resided here for a time. It was close to Kanauj, though across the Ganges in Harđoī District, that Humāyūn was defeated by Sher Shāh. Under Akbar, when order had once been restored, Kanauj entered on a long period of peace, and it is recorded in the *Ain-i-Akbari* as the head-quarters of a *sarkār*. During the eighteenth century it belonged sometimes to the Nawābs of Farrukhābād, again to the Nawābs of Oudh, and at times to the Marāthās. The town or kingdom of Kanauj has given its name to an important division of Brāhmans, and to many subdivisions of lower castes. Of the Hindu buildings which must have graced the place, nothing remains intact. The fine Jāma Masjid, built in 1406 by Ibrāhīm Shāh of Jaunpur, was constructed from Hindu temples, and the site is still known to Hindus as Sītā kī rasoi, or 'Sītā's kitchen.' There are many tombs and shrines in the neighbourhood, the most notable being those of Makhdūm Jahāniyā south-east of the town, and of Makhdūm Akhai Jamshīd 3 miles away, both dating from the fifteenth century. The most conspicuous buildings are, however, the tombs of Bālā Pīr and his son, Shaikh Mahdī, religious teachers who flourished under Shāh Jahān and Aurangzeb. The neighbourhood for miles along the river is studded with ruins, which have not been explored. The town lies on the edge of the old high bank of the Ganges, and, but for the high mounds and buildings described above, is not distinguishable from many places of similar size. The houses are fairly well built but small, and the most conspicuous modern building is a fine *sarai* recently completed. The dispensary, *tahsili*, and *munsifi* are at Sarai Mirān, 2 miles south of Kanauj. The town is administered under Act XX of 1856, with an income of about Rs. 4,000. It is famous for its scent distilleries, where rose-water, otto

of roses, and other perfumes are produced, which have a great reputation. Calico-printing is also carried on, but is not so important an industry here as in Farrukhābād city. There was formerly a small manufacture of country paper, and a cotton gin has been worked at intervals in the last few years. The town school has 113 pupils and two primary schools 96. There is also a flourishing aided school, housed in a fine building.

Kanaung.—Northern township of Henzada District, Lower Burma, lying between $17^{\circ} 54'$ and $18^{\circ} 19'$ N. and $94^{\circ} 48'$ and $95^{\circ} 31'$ E., with an area of 615 square miles. The population increased from 79,499 in 1891 to 92,365 in 1901, the density being 150 persons per square mile. The township extends from the Arakan Yoma in the west to the Irrawaddy, widening as it approaches the river. About one-third is uncultivable, being covered by the spurs of the Yoma. The lands in the western part are protected by embankments and fertile. The population consists almost entirely of Burmans, Karens, and Chins, in the proportions of 92, 6, and $1\frac{1}{2}$ per 100. There are 428 villages and one town, MYANAUNG (population, 6,351). Kanaung (891) is the head-quarters. The area cultivated in 1903-4 was 149 square miles, paying Rs. 2,25,000 land revenue.

Kanāwār.—The upper or north-eastern subdivision of Bashahr State, Punjab, consisting in great part of the valley of the Upper Sutlej. It lies between $31^{\circ} 7'$ and $32^{\circ} 5'$ N. and $77^{\circ} 48'$ and $79^{\circ} 4'$ E. It is bounded on the north by Spiti : on the east by Chinese territory : on the south by Bashahr proper and Tehri : and on the west by the Kochi subdivision of Bashahr. The estimated area is 1,730 square miles, and the population in 1901 was 17,741.

Kanāwār is a rugged country, 50 miles in length by 40 in breadth, through whose ridges winds the deeply cleft valley of the Sutlej. The precipitous banks of the main river afford little room for cultivation, but the valleys of its tributaries are assiduously tilled by the mountaineers. Until about forty-five years ago, grapes yielded an abundant vintage, being manufactured into raisin wine and strong spirit. Vine disease subsequently reduced the vintage to a quarter of what it once was, but has recently subsided. The population consists of a mixed Tibetan and Hindu race, the Mongolian element preponderating in the north, while the southern region is inhabited by persons of Aryan type. Alone among the neighbouring hill tribes, the Kanāwāris successfully resisted the Gurkha invasion, and so completely baffled the enemy by breaking down bridges, that the Gurkhas entered into a convention by which, in return for a tribute of Rs. 11,250, they agreed to leave the valley unmolested. Polyandry exists in its fullest form throughout Kanāwār. Religion, broadly speaking, follows race. The northern villages profess Buddhism of the Tibetan model; in the south Hin-

duism prevails, while the middle region shades off gradually from one faith into the other. The language varies, like the religion, from Tibetan in the north to neo-Sanskritic dialects on the Indian side. The chief villages in the valley are Sangnam and Kanum.

Kanbalu Subdivision.—Subdivision of Shwebo District, Upper Burma, containing the KANBALU and KYUNHLA townships.

Kanbalu Township.—North-eastern township of Shwebo District, Upper Burma, lying between the Mu and the Irrawaddy rivers, between $22^{\circ} 51'$ and $23^{\circ} 44'$ N. and $95^{\circ} 22'$ and $96^{\circ} 1'$ E., with an area of 1,636 square miles. The country is dry and flat, and only the south-western corner is at all thickly populated. The population was 31,872 in 1891, and 44,783 in 1901, distributed in 259 villages, Kanbalu (population, 1,003), on the railway, being the head-quarters. The area cultivated in 1903-4 was 132 square miles, and the land revenue and *thuthamedu* amounted to Rs. 64,300.

Kānchenjanga.—Mountain in Sikkim State, Bengal. See KINCHINJUNGA.

Kānchivaram.—*Tāluk* and town in Chingleput District, Madras. See CONJEEVERAM.

Kānchrāpāra.—Village in the Barrackpore subdivision, District of the Twenty-four Parganas, Bengal, situated in $22^{\circ} 57'$ N. and $88^{\circ} 26'$ E. Population (1901), 1,545. Kānchrāpāra is an important station on the Eastern Bengal State Railway, and the railway workshops are situated here. It lies within the HĀLISAHAR municipality.

Kandahār Province.—Province of Afghānistān, bounded on the north by the Taimani country in the Herāt province, and by the Hazārajāt and Ghazni districts of Kābul; on the east and south by Baluchistān; and on the west by Farrah. Within the administrative charge of the *naib-ul-hukumā* (governor) of Kandahār are comprised the division of Chakansūr, and the minor divisions or districts of Kalāt-i-Ghilzai, Mākūr, Pusht-i-Rūd, Zamindawar, and Girishk.

The province is divided into two well-marked portions, differing essentially from each other in character, by a line drawn from Kandahār to Farrah. North of this line, and also to the north-east, the country is hilly, and gradually becomes more mountainous northwards. The general elevation of portions of Pusht-i-Rūd and Zamindawar is about 4,000 feet, while in the Bhagni tract of Pusht-i-Rūd there are mountains of 10,000 feet in altitude. In the north-east Kalāt-i-Ghilzai is 5,543 feet above sea-level, and in its neighbourhood are peaks of not less than 9,500 feet. South of the dividing line above mentioned, the elevation is at first between 2,000 and 2,500 feet, but it rapidly decreases. The country watered by the lower courses of the Harūt, Farrah, and Helmand is open, forming the only plains of Afghānistān proper. To the south of Kandahār city is the desert of Registān; in

the south-west lies the great Afghān-Seistān desert. The province is drained by the Kadenai, Tarnak, Arghastān, Arghandāb, Helmand, Harūt, and Farrah Rūd rivers. Rising in the mountains north of the province, the Helmand with its tributaries eventually loses itself in the Seistān Hāmūn.

The name of the province seems to connect it with the Indian people known to the Greeks as *Gandarii*, but the present inhabitants are almost entirely Durrānis. The towns contain a considerable number of Pārsiwāns (people of Persian descent), while in Kandahār city there are about 5,000 Hindus. No reliable estimate of the total population can be given.

The climate varies considerably; that of the deserts is excessively trying, but with this exception it is on the whole good. In the mountainous regions the winters are severe, but elsewhere the cold is not great.

Kandahār City.—Capital of the Kandahār province of Afghānistān, situated in $31^{\circ} 27' N.$ and $65^{\circ} 43' E.$, 354 miles from Herāt by the shortest route, 313 from Kābul via Maidān, and about 62 miles from the British border at New Chaman; 3,462 feet above the sea. The city is situated between the Tarnak and Arghandāb rivers on a level plain, intersected by numerous canals, and highly cultivated and well populated to the south and west, but barren to the north, north-west, and north-east. It forms an irregular oblong, longest from north to south, with a circuit of over 3 miles. It is surrounded by a ditch 24 feet wide and 10 feet deep, and by a wall 27 feet in height. There are six gates, two each on the east and west, and one on the north and on the south. The four principal streets are about 40 yards wide, and are named after the gates to which they lead from the Chārsu, their point of intersection. Smaller and narrower streets branch from the main arteries towards the city walls. Kandahār is divided into four quarters, the various tribes which constitute the inhabitants occupying, to a great extent, separate portions. The different classes of merchants and shopkeepers also occupy separate streets, or portions of streets, in the various quarters. The houses are generally built of sun-dried bricks, and are flat-roofed, some with upper storeys. Those of the rich are enclosed by high walls, and many contain three or four courts, with gardens and fountains. The citadel is situated at the north of the city. South of it is an open space called the *T'opkhāna*; west is another open space in which is situated the tomb of Ahmad Shāh Durrāni. This structure overtops all the surrounding buildings, and its lofty dome attracts the attention of the traveller approaching the city from a distance. There are more than 180 Sunni mosques in the city, of which the Khirka Mubārak, a place of sanctuary (*bast*), is the most celebrated. Notwithstanding the large number of Shiah inhabitants, there is no

Shiah mosque. A commodious caravanserai exists outside the eastern gate for the storage of wool and other goods going to India.

The total population of Kandahār city is estimated at 31,000, among whom Pārsiwāns predominate. There are about 1,600 shops, and a *ganj* where a large cattle, sheep, and grain market is held daily. The usual water-supply is derived, by numerous canals, from the Arghandāb, but an ample supply is also available from wells. The climate of Kandahār is not salubrious, probably owing to the want of sanitation and to the large graveyards on one side and the marshes on the other. The rainfall is small, and occurs during the winter and early spring. In the summer months the heat is intense. The temperature varies greatly between sunrise and mid-day, sometimes by as much as 40° or 50°.

Kandahār is famous for its fruits, which are as plentiful as they are good ; apricots, peaches, pomegranates, grapes, figs, and melons are all excellent of their kind and, fresh or dry, are largely exported. A considerable amount of tobacco is also grown for export to India.

Kandahār is one of the principal trade centres in Afghānistān. There are no manufactures or industries of any importance peculiar to the city ; but the long lines of bazars display goods from Great Britain, India, Russia, Persia, and Turkistān, embracing a trade area as large probably as that of any city in Asia. The customs and towns dues together amount to a sum equal to the land revenue of the entire province. The Hindus are the most numerous and the wealthiest merchants in Kandahār, carrying on a profitable trade with Bombay and Sind. They import British manufactures, e.g. silks, calicoes, muslins, chintzes, broadcloth, and hardware ; and Indian produce, such as indigo, spices, and sugar. They export asafoetida, madder, wool, dried fruits, tobacco, silk, rosaries, &c. In 1903-4 the exports to India from Kandahār were valued at nearly 35 lakhs, and the imports at 33 lakhs.

From early times Kandahār must have been a town of much importance in Asia, as being the central point at which the roads from Herāt, Seistān, Ghor, Kābul, and India unite. The position did not escape the notice of Alexander the Great, and Kandahār (*Alexandria Arachoton*) is probably one of the cities that he founded or rebuilt. After being a portion of the Seleucid, Parthian, Sassanid, and Arab empires, Kandahār, on the break-up of the Khalīfat, fell successively to the Persian Saffārids and Sāmānids, to the house of Ghazni, the Seljūks, the Ghorids, and the Shāhs of Khwārizm, and in 1222 it was captured by the Mongols under Chingiz Khān. From his descendants it passed for a time to the Kart dynasty of Herāt, an offshoot of the Ghorids, and in 1389 it was taken by Tīmūr Lang. Between 1468 and 1512 it was under local chiefs, but in the latter year it was recovered for

the 'Timūrids by Bābar, the founder of the Mughal empire. After his death Kandahār was a constant subject of contention between the Mughals and the Persian Safavids; and after being several times captured and recaptured by one or the other, it finally passed out of Mughal possession in 1648, the subsequent efforts of Shāh Jahān's sons, Aurangzeb and Dārā Shikoh, to recover it proving fruitless. In 1708 the Ghilzais of Kandahār threw off the Persian yoke, and a few years later defeated the Safavids in Persia itself. Persian rule was restored for a short time by Nādir Shāh, who destroyed the city in 1738 and built a new one. The old city is now known as Shahr-i-Kohna, and its ruins lie at the base of a bare rocky hill 3 miles to the west of the present town. Nādir Shāh's foundation was in turn destroyed by his Afghān successor, Ahmad Shāh, who founded the existing city in 1747. In 1834 Shāh Shujā, the dispossessed (Sadozai) king of Afghānistān, attempted to re-establish himself in Kandahār, but he was driven off by his Bārakzai rival, Dost Muhammad, who, after his victory, took the title of Amīr.

This was the last unaided attempt of the Sadozais to retake Kandahār. The next time Shāh Shujā appeared on the field it was with the support of the British Government. The Army of the Indus occupied Kandahār in April, 1839, and Shāh Shujā was crowned there in May. While the restored king with the main British army marched on Kābul, a force was left under General Nott to hold Kandahār. In 1842, after the revolt at Kābul and the massacre of Burnes and Macnaghten, an attack was made on the city by large bodies of Afghāns under Safdar Jang Sadozai, but it was beaten off with heavy loss, and a fresh attempt soon after was equally unsuccessful. In August, 1842, Nott marched to Kābul, and Safdar Jang then took possession of Kandahār, only to be driven out four months afterwards by Kohan Dil Khān, who had come from Persia. On the death of the latter in 1855 his son, Muhammad Sādik, held the city for a short time until Dost Muhammad took possession in November of the same year. Dost Muhammad appointed his son, Ghulām Haidar Khān, governor, and on his death in 1858 Sher Ali Khān succeeded him. On the latter becoming Amīr, he appointed his full brother, Muhammad Amīn Khān, to be governor. This chief rebelled and was killed in battle in 1865. Kandahār again fell into Sher Ali's hands; passed from his grasp to that of his half-brother and rival, Azīm Khān, in 1867; and again fell into the power of Sher Ali, through his son, Yakūb Khān, in 1868.

During the last Afghān War Kandahār was occupied by British troops in January, 1879; and in May, 1880, Sardār Sher Ali Khān was installed as Walī of the Kandahār province, which was to be independent of Kābul. In July, Sardār Muhammad Ayūb Khān, a younger

brother of Yakūb Khān, advancing from Herāt, inflicted a crushing defeat on a brigade of British troops at Maiwand and invested Kandahār. A relieving force under General Roberts left Kābul on August 8, arrived at Kandahār on the 31st, and on September 1 totally defeated Ayūb, whose camp, artillery, and baggage were captured, the Sardār escaping with a handful of followers. The victory immediately quieted the country, and the last of the British forces evacuated Southern Afghānistān in April, 1881. Sher Ali Khān had found himself too weak to maintain the position conferred on him, and had retired, at his own request, to India, where he ended his days as a British pensioner. Within three months of the British withdrawal, Ayūb Khān, who had been maintaining himself with spirit at Herāt, again took the field, and, after defeating Abdur Rahmān's troops, occupied Kandahār. He was, however, utterly defeated by the Amīr in September, 1881, and fled towards Herāt; but that city had, meanwhile, been occupied by one of the Amīr's lieutenants, and Ayūb Khān had to seek refuge in Persia. He came to India in 1888, and has since resided there.

Kandahār.—Western *tāluk* of Nānder District, Hyderābād State, with an area of 680 square miles. The population in 1901, including *iāgīrs*, was 97,728, compared with 128,525 in 1891, the decrease being due to the famine of 1900. Kandahār contained till recently one town, MUKKHER (population, 6,148), the head-quarters; and 190 villages, of which 37 are *jāgīr*. The land revenue in 1901 was 2.5 lakhs. *Regar* forms its predominant soil. In 1905 the *tāluk* was enlarged by the addition of some villages from Osmānnagar.

Kandh.—Tribe in the Central Provinces and Madras. See KHOND.

Kandhkot.—*Tāluka* of the Upper Sind Frontier District, Sind, Bombay, lying between 27° 59' and 28° 27' N. and 68° 57' and 69° 22' E., with an area of 543 square miles. The population in 1901 was 48,723, compared with 30,369 in 1891. The density, 90 persons per square mile, approximates to the District average. The *tāluka* contains 82 villages, of which Kandhkot is the head-quarters. The land revenue and cesses in 1903-4 amounted to nearly 1.9 lakhs. The *tāluka* depends for irrigation upon the Begāri, Unhar Wah, and Desert Canals, the canals from the Kashmor Band, and upon river floods.

Kāndhla.—Town in the Budhāna *tahsīl* of Muzaffarnagar District, United Provinces, situated in 29° 19' N. and 77° 16' E., near the Eastern Jumna Canal, 29 miles south-west of Muzaffarnagar town. Population (1902), 11,563. It is situated on low ground and the neighbourhood is swampy. The more important streets are metalled and drained. Kāndhla was constituted a municipality in 1872. The income and expenditure during the ten years ending 1901 averaged

Rs. 6,700. In 1903-4 the income was Rs. 11,000, chiefly derived from *stroi* (Rs. 6,600); and the expenditure was Rs. 11,000. There is a considerable local trade in grain, cotton, and cloth, which is manufactured here. The *iqbal* school had 130 pupils in 1904.

Kandhmāls.—Subdivision in Angul District, Bengal. See **KHOND-MĀLS**.

Kāndi Subdivision.—South-western subdivision of Murshidābād District, Bengal, lying between $23^{\circ} 43'$ and $24^{\circ} 12'$ N. and $87^{\circ} 50'$ and $88^{\circ} 14'$ E., with an area of 512 square miles. The subdivision, which is watered by the Bhāgīrathi and Dwārka rivers, consists for the most part of undulating country, but near those rivers the land is alluvial and low-lying. The population in 1901 was 334,053, compared with 297,122 in 1891, the density being 652 persons per square mile. It contains one town, KĀNDI (population, 12,037), its head-quarters; and 883 villages.

Kāndi Town.—Head-quarters of the subdivision of the same name in Murshidābād District, Bengal, situated in $23^{\circ} 58'$ N. and $88^{\circ} 3'$ E., near the Mor river. Population (1901), 12,037. Kāndi owes much of its importance to the fact that it is the residence of the Rājās or Paikpāra, a wealthy and devout Hindu family. The founder of this family was Gangā Gobind Singh, a banian of Warren Hastings, who was born at Kāndi, and retired thither in his old age with an immense fortune, which he devoted to the erection of shrines and images of Krishna. His name has acquired a traditional celebrity for the most magnificent *śrāddha* or funeral obsequies ever performed in Bengal, costing 20 lakhs, in honour of his mother. Kāndi was constituted a municipality in 1869. The income and expenditure during the decade ending 1901-2 averaged Rs. 7,000. In 1903-4 the income was Rs. 9,000, mainly from a tax on persons; and the expenditure was Rs. 8,000. The town contains the usual public offices, a sub-jail with accommodation for 24 prisoners, and a dispensary with 24 beds. The latter is maintained from the proceeds of an endowment fund, now amounting to 1.59 lakhs, left by the late Kumār Giris Chandra Sinha of Paikpāra, and is the best-equipped hospital in the District.

Kāndi.—Village in the Kalabgūr *tāluka* of Medak District, Hyderabad State, situated in $17^{\circ} 35'$ N. and $78^{\circ} 6'$ E., 5 miles south-east of Sangareddipet. Population (1901), 1,573. Upon the open plain close by stand two stones with Telugu or old Kanarese inscriptions, surmounted by the sun and moon.

Kandiāro Tāluka.—*Tāluka* of Hyderabad District, Sind, Bombay, lying between $26^{\circ} 55'$ and $27^{\circ} 14'$ N. and $68^{\circ} 2'$ and $68^{\circ} 30'$ E., with an area of 320 square miles. The population in 1901 was 62,937, compared with 55,733 in 1891. The density, 197 persons per square mile, is, after Hyderabad *tāluka*, the highest in the

